

MOTOR AGE

Vol. L
Number 14

PUBLISHED WEEKLY AT 5 SOUTH WABASH AVENUE
CHICAGO, OCTOBER 7, 1926

Thirty-five Cents a Copy
Three Dollars a Year

*"A nice profit for first six months;
fortunate in securing Stutz franchise"*

So declares

Walter A. Weidely

Vice-President & General Manager
The Ohio Stutz Company, Cleveland

NOT only that, but Mr. Weidely finds the New Safety Stutz minimizes the used-car and the service-expense problems.

And he challenges his neighbors to show a more enthusiastic and satisfied group of owners than those to whom he has sold the New Safety Stutz.

There's a lot more meat, too, in Mr. Weidely's letter, reproduced at the right. Read it, and see if it doesn't make you envious.

If it does, we invite you to write us for full details of the Stutz Dealers' Proposition.

STUTZ MOTOR CAR CO.
of AMERICA, Inc., Indianapolis

Stutz Motor Car Company,
Indianapolis, Ind.

Gentlemen:

The usual bugbears of the automobile business, such as used-car and service-expense problems, have been greatly solved by the wonderful New Safety Stutz. If the mechanical advantages are properly explained and the luxury features of comfort, convenience, and ease of handling are pointed out, our salesmen have no resistance in trading. The very distinctive class of our car makes trading a profitable business rather than a menace.

We defy any distributor in the city of Cleveland to show a more enthusiastic and satisfied group of owners. This has been made possible only by an automobile that delivers the goods and a most sympathetic and co-operative factory policy. The greatest indication to my mind of the wonderful future for Stutz is the way our salesmen work and the enthusiasm on their part.

You, of course, know the number of cars we have delivered and we can state that an audit of our books at the end of July has shown us a very nice profit for the first six months of operation.

We consider ourselves very fortunate in securing the Stutz franchise and wish to express our thanks for your co-operation in every respect.

Very truly yours,
THE OHIO STUTZ COMPANY

Walter A. Weidely

Vice-President-Gen. Mgr.

New

SAFETY STUTZ

MANLEY

SCREW PRESSES

20 TON SCREW PRESS

An inexpensive screw press for the small shops, Strong, Rugged, Powerful. Will handle all work on the lighter type cars.

Open Side Construction

—will handle pieces of any length.

Exposed Screw

—stubborn parts may be jarred loose by a hammer blow on the exposed top of the screw.

Four Leverages

—speed and power may be quickly and easily adjusted according to the job.

Two Separate Tables

—use lower table when working on axle shafts and long parts.

Upper Table Adjustable.

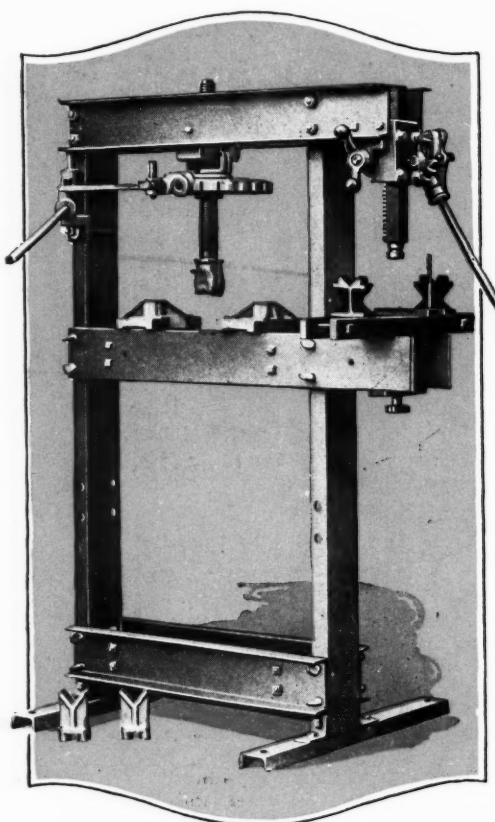
Ball Bearing Hand Wheel

—quickly spins nose down to work or away from work.

Independent Arbor Press

—indispensable for starter and generator work and other work requiring sensitive rack and pinion press.

Complete Equipment



CAT. No. 3--Press only.....	\$71.00
Rack and Pinion attachment.....	25.00
Crank shaft straightening attachment....	8.00

35 TON SCREW PRESS

CAT. No. 2--Press only	\$100.00
Rack and Pinion attachment.....	25.00
Test Centers.....	15.00

This 35 ton press is similar to the 20 ton press described above and has additional advantages as follows:

Heavier in construction
More powerful
Five speeds and leverages
Counter weighted hand wheel
Winch operated table

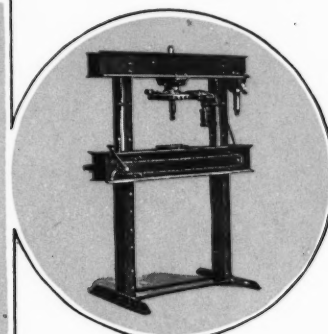
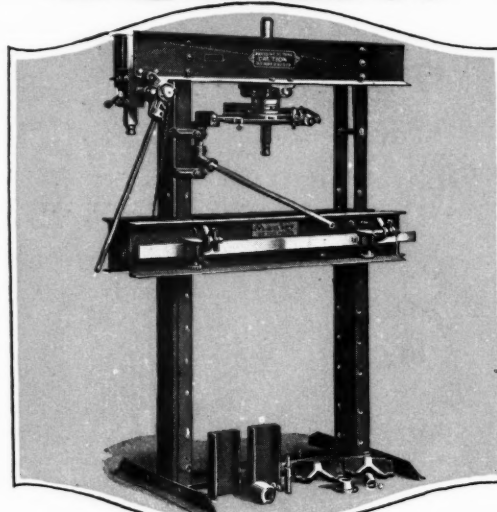
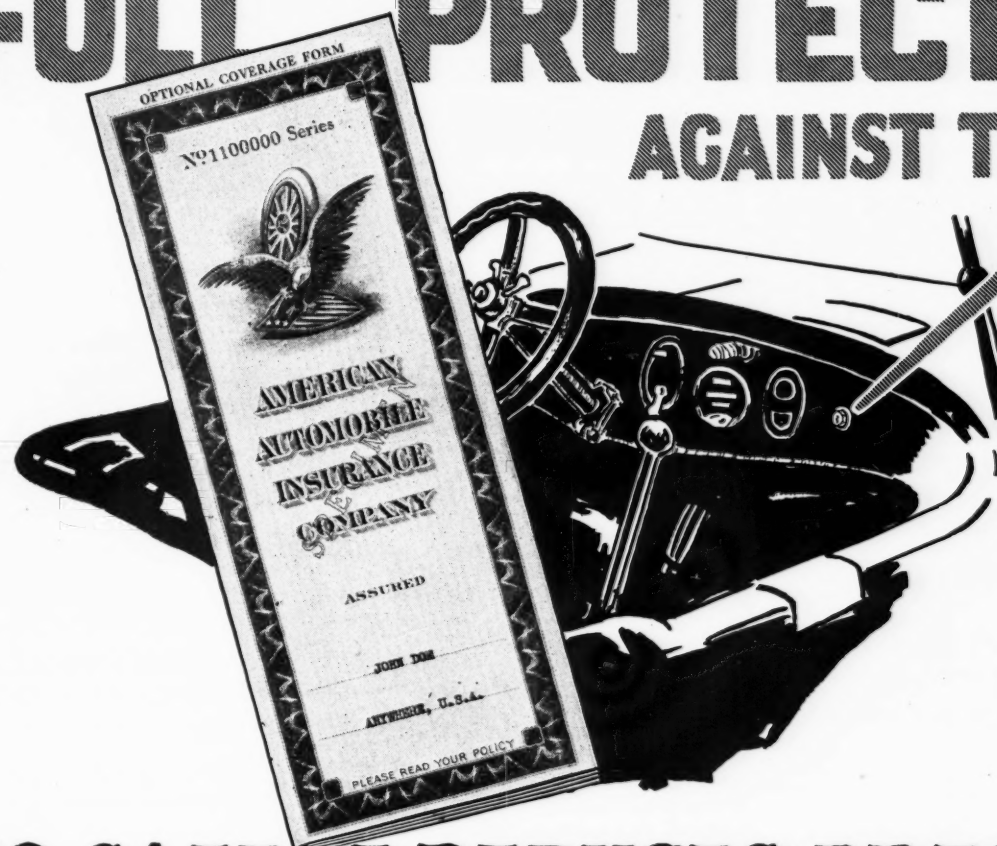


Table may be adjusted from lowest to highest position by means of hand crank in 15 seconds.

Your Jobber Can Supply You
MANLEY MFG. CO. - YORK, PA.

FULL PROTECTION AGAINST THEFT

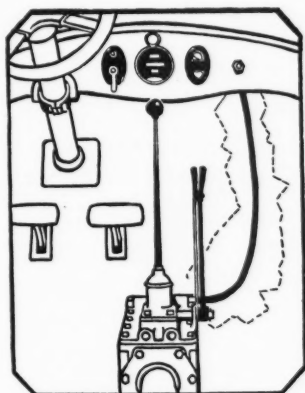


One turn of
ignition key
locks BOTH
ignition &
transmission

SO SAFE IT REDUCES PREMIUMS

So safe and theft-proof is the Blossom Coincidental Lock that the American Automobile Insurance Company has reduced theft insurance rates on all cars protected with this positive locking device.

Such action is but further evidence that a transmission lock controlled by the ignition key is the ultimate car lock. It is additional proof that there is a steadily growing demand from the car-buying public for full protection against theft such as the Blossom Lock affords.



THE BLOSSOM LOCK COMPANY
CLEVELAND, OHIO

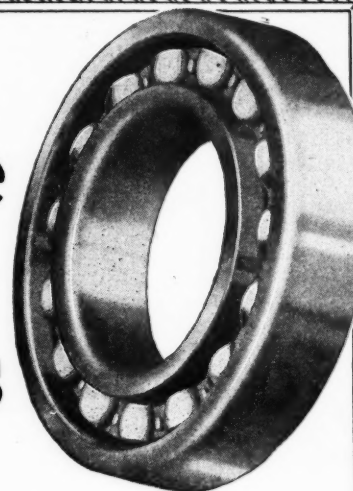
Consider that twenty per cent of the cars stolen are never recovered. Consider also that of those which are returned, many are badly damaged and it is small wonder that the owners and the underwriters who protect them with insurance are demanding a solution.

The Blossom Lock is that solution. That is why dealers handling Blossom Locks are doing a brisk business. If you want to participate in the profits incident to this new and timely invention, write today for details.

"We are very glad to say to you that we believe your lock to be certainly one of the best, if not the very best, ever devised as a theft preventative." The American Automobile Insurance Company, St. Louis, Mo.

BLOSSOM COINCIDENTAL LOCK

New Departure Quality Ball Bearings



Speaking of Bearing Life—

You can make an accurate estimate of the relative life span of various bearings by asking your nearest bearings distributor which makes give him the most replacement business.

New Departure makes close to 120,000 ball bearings a day, yet its Service Department is handled adequately by just one man.

MOTOR AGE

Reg. U. S. Pat. Office

Vol. L

No. 14

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MOTOR AGE is published every Thursday by
CHILTON CLASS JOURNAL COMPANY

Mallers Building, 5 South Wabash Avenue, Chicago

C. A. MUSSELMAN, President and General Manager

J. S. HILDRETH, Vice-Pres. and Director of Sales

W. I. RALPH, Vice-Pres.

DAVID BEECROFT, Vice-Pres.

J. H. COLLINS, Vice-Pres.

A. H. VAUX,
Secretary and Assistant Treas.

H. J. REDFIELD,
Treasurer

Cable Address: Motage, Chicago

Telephone: Central 7045

OFFICES

New York—U. P. C. Bldg., 239 West 39th St.; Phone Pennsylvania 0080.

Detroit—7338 Woodward Ave.; Phone Empire 4890.

Cleveland—540 Guardian Bldg.; Phone Main 6860.

Philadelphia—56th and Chestnut Sts.; Phone Sherwood 1424.

Indianapolis—519 Merchants Bank Bldg.; Phone Riley 3212.

Owned by United Publishers Corporation, 239 West 39th Street, New York; ANDREW C. PEARSON, Chairman Board of Directors; FRITZ J. FRANK, President; C. A. MUSSELMAN, Vice-President; F. C. STEVENS, Treasurer; H. J. REDFIELD, Secretary.

SUBSCRIPTION RATES: United States, Mexico and U. S. Possessions, \$3.00 per year; Canada, \$5.00 per year; all other countries in Postal Union, \$6.00 per year; single copies, 35 cents.

Member of the Audit Bureau of Circulations.
Member, Associated Business Papers, Inc.

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Subscriptions accepted only from the Automotive Trade

Entered as Second Class Matter, Sept. 19, 1899, at the Post Office at Chicago, Ill., under Act of March 3, 1879

Dealers Look!

SELL THE AMAZING

Lepel

TRADE MARK
HIGH FREQUENCY
CONVE RTERS



Attach to spark plugs
— Not a spark gap!
Can be used on all
spark plugs

MORE POWER LESS GAS
HOTTER SPARK
ALWAYS FIRES THE PLUG
CLEAN PLUGS STAY CLEAN
LESS DRAIN ON
BATTERY OR MAGNETO
FASTER "GETAWAY"

Definite and noticeable ignition improvement.
Pronounced saving in car operation.

Not "just another accessory." Has made good on hundreds of thousands of cars, motorcycles, trucks, tractors, motorboats and airplanes.

LIST PRICE \$1 EACH

GUARANTEED to perform as claimed or dealer is authorized to refund purchase price. Will not disarrange electrical system.

Sales operations carried on through jobbers.

Ample support given to thoroughly effect distribution in jobbers' area. Sales policy formed with sole thought of giving greatest satisfaction to both jobber, dealer and car-owner.

DEALERS NOTE

If your jobber is not yet supplied with Lepel Converters write us direct for nearest jobbing connections.

LEPEL IGNITION CORPORATION
117 West 63rd Street New York



"Superrench" boards are included free to dealers purchasing the wrenches they display. Six assortments are described in booklet which is yours on request.

Put Your "SUPERRENCH" Stock in Position to Make More Sales

PUT your "Superrenches" where they'll make quicker turnover—on a well placed Williams' display board. Two "Superrenches" on a board sell quicker than one in a drawer. You have to take that one out and show it. But on a board, "Superrenches" sell themselves.

A board full of handy looking, handsome, nickel-finished Chrome-Molybdenum "Superrenches" attracts the customer's interest. And when he sees that "Superrenches" are guaranteed *breakproof*—he buys.

Your Jobber's Salesman Will Gladly
Get You this Sales Boosting Board.
Ask Him.

WILLIAMS
SUPERIOR DROP-FORGED TOOLS
"SUPERRENCH"
(Chrome Molybdenum)
WRENCHES

J. H. WILLIAMS & Co.

"The Wrench People"

New York

BUFFALO

Chicago



*If you want to get
in touch with*

OPPORTUNITY

Get in touch with

STUDEBAKER

The new Studebaker Custom Sedans, economized by One-Profit manufacture, are today selling in the ratio of two for one over sales of a year ago—doubling the satisfaction of Studebaker owners—doubling the business of Studebaker dealers—and doubling the value of the Studebaker Franchise.

*We don't know whether your
territory is open, but if it is—*

*The right kind of a dealer can
make the right kind of a deal—*

With Studebaker!

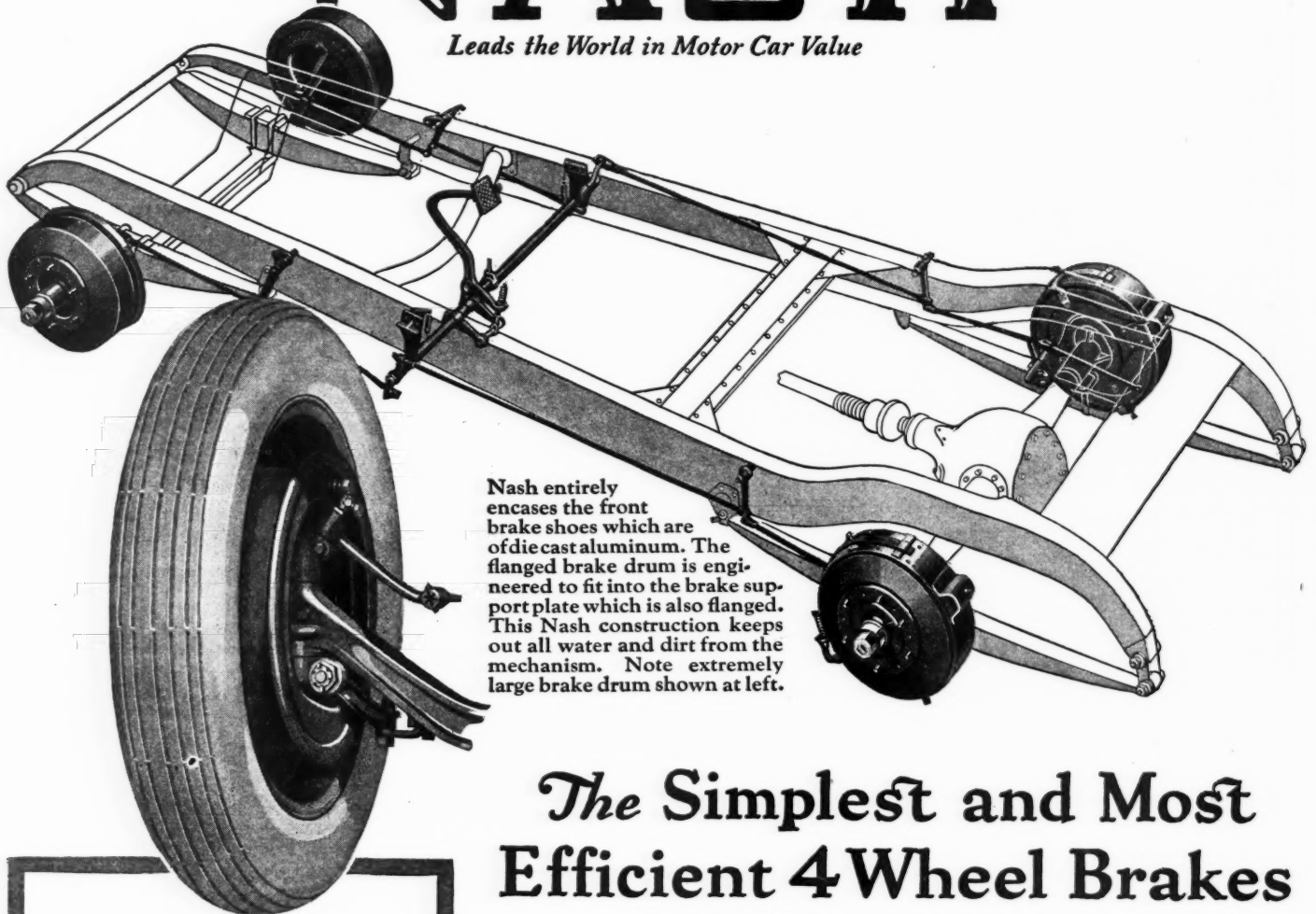
Address Dept. 51

THE STUDEBAKER CORPORATION OF AMERICA
SOUTH BEND, INDIANA

S T U D E B A K E R

NASH

Leads the World in Motor Car Value



Nash entirely encases the front brake shoes which are of die cast aluminum. The flanged brake drum is engineered to fit into the brake support plate which is also flanged. This Nash construction keeps out all water and dirt from the mechanism. Note extremely large brake drum shown at left.

The Simplest and Most Efficient 4 Wheel Brakes

Standard Equipment—No Extra Cost

New Nash Features

7-bearing crankshaft motor—*world's smoothest type*—powers all new Nash models.

New-type crankcase "breather" which prevents crankcase dilution.

New double beam headlights with convenient steering wheel control.

Rich new body finish colors.

All enclosed bodies are of the expensive wood-frame body construction employed by finest American and European motor cars.

And a long list of added new improvements.

Another vital Nash mechanical superiority is the special Nash 4-wheel brake system—the safest, simplest and most efficient type known to the industry.

Fully equalized to right and left, front and rear, these brakes banish entirely the dangerous swerving characteristic of partially equalized brakes.

They are of unique simplicity in design, having fewer points requiring lubrication than any other mechanical brake system.

Extreme heat or severest cold does not hamper operation. And continuous efficiency is maintained by reason of their permanency of adjustment achieved thru the use of exceptionally large braking surfaces.

Their instant, powerful, but velvety ease-ful pressure is scientifically distributed, 60% to the rear and 40% to the front.

The sixteen new Nash models now on display range in price from \$865 to \$2090 f. o. b. factory.

Astounding Results

The new James *Self-Cooling* Valve strikes at the very root of all valve troubles.

For here, at last, is a valve that cannot *burn—warp—scale—or pit* under any and all conditions.

This remarkable accomplishment has been made possible only through radical developments in design and the creation of an entirely new metal.

First, the new James *Self-Cooling* Valve dissipates heat at its very source—in the head. As the hot gases rush past the three vent holes, they create a suction—drawing out the heat within the head. Furthermore, there is no mass of metal in the head to retain heat and drive it down the stem.

But, of equal importance is the new metal—Ni-chro-loy. This

outstanding advance in the development of heat-resisting alloys absolutely will not *burn—warp—scale or pit*—even at temperatures far above those produced in high speed engine operation.

The net results are radically improved engine performance—freedom from valve troubles—and a longer valve life than has ever before been known even with the finest valves.

The new James *Self-Cooling* Valve costs no more than the ordinary all-steel valves—in spite of its sensational performing ability.

The big and profitable truck, bus, and high-powered passenger car market is ripe for this valuable advance in valve performance—jobbers and dealers are urged to investigate its full possibilities.

Distributors and Dealers!

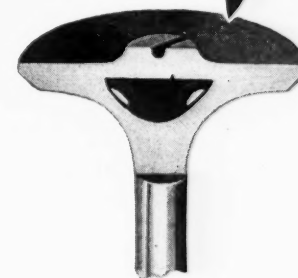
Write or wire for full details

JAMES MOTOR VALVE COMPANY

1314 Maple Street Detroit, Michigan

Makers also of the well-known

James Two-Piece (cast-iron head) valve



This cut-away view of the new James *Self-Cooling* Valve shows the exclusive patented Grant *hollow-head* construction. Three vent holes provide ready exit for heat within the head. Expansion and contraction are minimized—the valve is lighter, a much desired quality where power and speed are vital.

JAMES

Self-Cooling Valve



A NEW BEAUTY COMING FROM CHRYSLER

The New Chrysler "70" which is to appear October 9 again will upset all the common conceptions of motor car beauty, of distinctive individuality, of flawless artistry and symmetry.

Once this was done in the initial Chrysler "70"—whose masterpiece design, at once an inspiration and a discomfiture to others, is now preserved and perpetuated in the Chrysler "50" and the Chrysler "60".

Now it is to be done all over again in the new Chrysler "70" to be announced on October 9, a car whose fresh, new beauty blandly ignores the accepted and the commonplace and strikes out into an even more pronounced Chrysler leadership.

This announcement is of vital interest to every dealer who is concerned with increasing his business and his profits. Your request for further information will be held in strictest confidence.

CHRYSLER SALES CORPORATION, DETROIT, MICH.
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONT.



To Sell Terms Instead of Commodities Is Wasteful

*The Use of Undue Extension of Credit to Attract Business Leads to
Failure, Says Business Authority*

By J. H. TREGOE

Executive Manager National Association of Credit Men

WHEN a business enterprise gets to the point of selling terms and not just commodities, dangers are brought about that are not always recognized until serious damage has been done.

Carrying receivables is an item of operating costs that seldom appears in a budget or a calculation of operating costs. It is a cost, nevertheless, and should be reckoned with, if the exact amount of operating costs is sought. If a commodity sold at a certain price, and on terms of say 60 days, 2 per cent for cash in 10 days, there is a carrying cost whether it is recognized or not, should the account not be liquidated until 60 days; and this cost really increases proportionately if the account is carried beyond the 60 day period. If the discount for cash is taken in 10 days then the money should be used to an equal advantage in paying the creditor's obligations. If the discount offered for cash in 10 days is not received until the expiration of 15 or 20 days, then the creditor is severely penalized and the carrying cost of the account very much increased.

It happens all too frequently that business enterprises fail to recognize the cost of selling terms until the balance sheet at the end of a season or a year fails to meet expectations, and may show the business to have been conducted at a loss of at an anticipated profit.

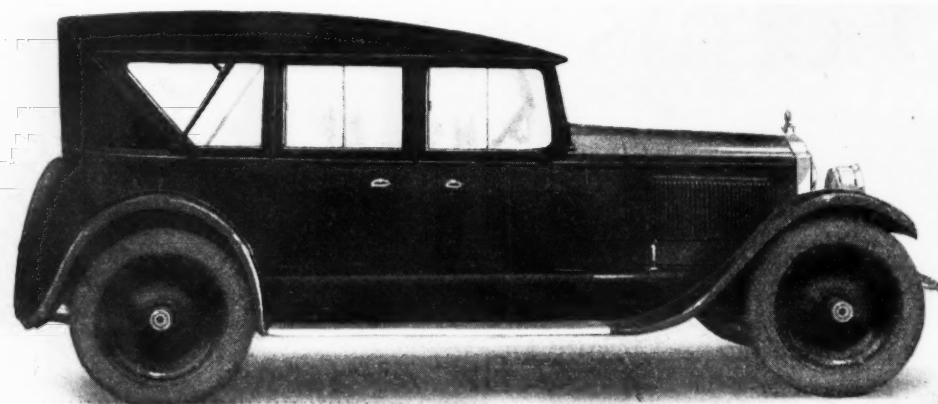
Seemingly of late the competition in sales, instead of being confined to legitimate features, has taken the form of terms and discount offerings, the seriousness of which in the final results of a business could not have been reckoned with. The discount for cash should not be granted on terms or conditions that will make it simply a trade discount, instead of what it really is, a discount for cash.

If in selling on long terms, with a discount for cash privilege, the creditor is willing to accept a note payable at the end of the period, with a discount allowed and interest added from the expiration of the discount for cash period to the expiration of the net period, with legal interest added, the real purpose of the discount for cash has been abused, for a note, even with a good endorsement, is not cash, and when discounted is a contingent liability of the payee. To have such a practice creep into any line of business for the purpose of stimulating sales, spells ultimate failure.

We cannot play fast and loose with terms if we want to conserve profits. Terms are nothing more than what they are intended to be, the measure of the credit; to use them as a sales feature is attacking one of credit's fundamental principles and will play havoc with any business if practiced too widely. Do not sacrifice stability and sound business methods to mere expedients, particularly when the expedients will cause a serious backwash when overdone.

Winter Enclosures

Estimated Operation of 12,000,000 Open Automobiles Gives Hint of Market for Cold Weather Comfort



This winter enclosure suggests style as well as comfort

the voice of Peggy fairly thrilled him as he took up the receiver.

But could it be? Was this the same Peggy he had said good-bye to but a brief hour before, sulking and pouting most enticingly, but nevertheless sulking, because he, Suthers, office manager of the Bondwell Corporation, could not buy her a new closed car?

A poster like this in your window should be used to help put the winter enclosure idea across

"CENTRAL station, all out" shouted the brakeman.

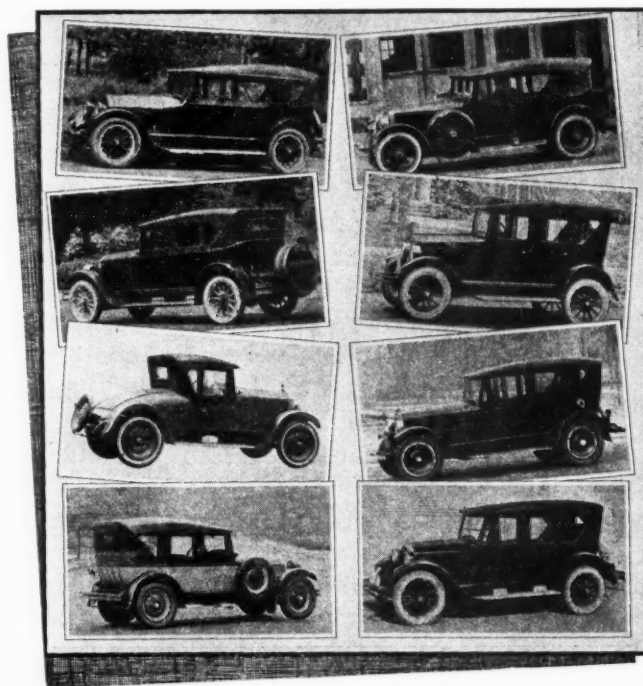
Suthers looked up with a start. It seemed but a moment since he had waved a good bye at the West Morland station.

"Another mile or two," thought Suthers, "and I would have figured it out.

The "it" referred to was embodied in some hundred sheets of neatly bound paper covered in gaudy red and modestly captioned, "Solve All Your Problems With the Bondwell Budget Plan.

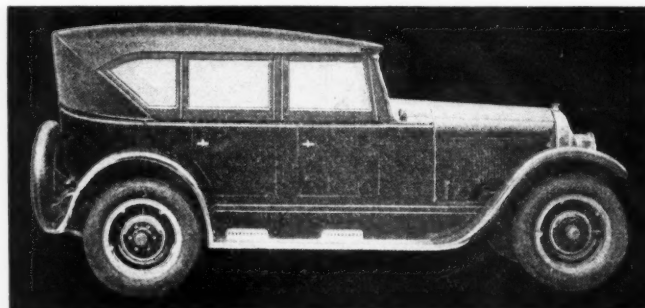
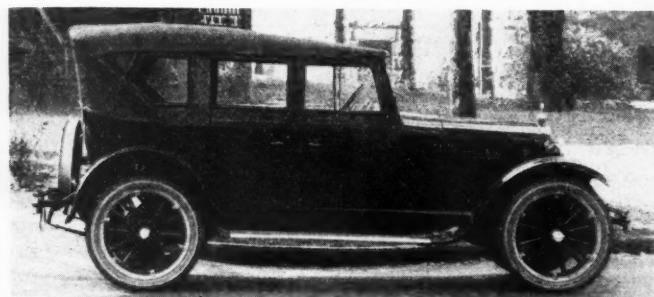
The irony of fate burned deeply into the aspirations of Suthers for it had been at his suggestion that the Bondwell Corporation had put out the insidious volume with the enticing red cover. It was the most clever of plans, no doubt of that, but so far it had failed to live up to its title and solve for him the problem of living in the suburb, meeting the payments on the bungalow, keeping up with the social demands which a membership in the West Morland Club entailed and still leave enough over to get the new closed car that Peggy had talked about for the last two years—or was it three?

Slowly and disconsolately Suthers made his way to the office, and took up his daily round of duties. He had just reported to his chief on the activities of the previous day when there was a call on the phone and



\$30 to \$59 buys one of these enclosures which are made for Ford, Star, Chevrolet, Gray, Maxwell and Dodge Brothers roadsters and touring cars

This enclosure is made for 15 different makes of cars. The price is \$62.50 for types which formerly sold at from \$85 to \$90



Help Sell Used Cars

By A. H. PACKER

Where the value of the car warrants a complete top can be installed to still further improve the car's appearance



Now she was fairly bubbling over with a plan to get an open car that one of the club members had for sale. It was only a couple of years old, ran like a new car and looked it, except that the new cars had nicked radiators.

"But Honey," Suthers expostulated, "You'd freeze in a car like that."

"Another guess for you," said Peggy. "You should see the big poster in the window of the West Morland garage. They just put it up this morning. It shows the best looking cars you ever saw—open ones, but each one is fixed up with glass sides that just match as if they were made for the car. They even have them finished in leather to match the different cars—and windows that open and shut. We can buy the car and an enclosure for about one-third of the cost of a new car, and when we get the bungalow paid for it will be time enough to step out with a new car."

When Suthers hung up he gazed at the red budget disapprovingly. "You're a snare and a delusion," he said and tossed it into his desk. The problem had been solved, but the little red budget had had no hand in the proceedings.

But up at the West Morland Garage another problem had been solved, a problem that had kept Uperly, the

manager, awake nights for the last month. Sales of cars had been fair during the latter part of the summer and had picked up some during the early fall, but they had been mostly closed car sales. Like the welcome bride they carried in their train a mother-in-law to join the family—the unwelcome open car, easy to get and hard to lose.

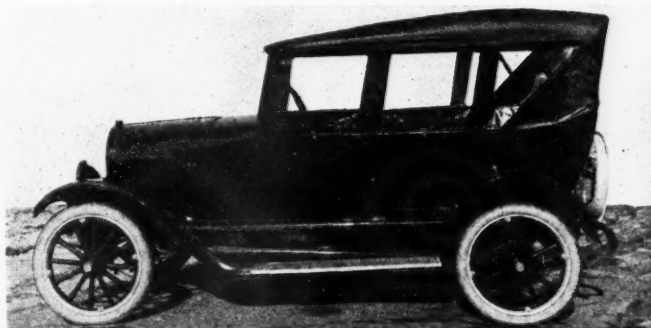
Twelve million open cars in service in the United States, Uperly had read, and most of them being traded in at the West Morland garage, it seemed to him. Now, however, a remedy had been found and the open cars were going out about as fast as they were taken in, for they were open no longer. A winter enclosure to match the car made the difference.

It was surprising how the appeal of winter comfort equal to that of a sedan, combined with the possibility of having a real open car for summer use, sold the open cars to those who were not in a position to spend more than a few hundred dollars.

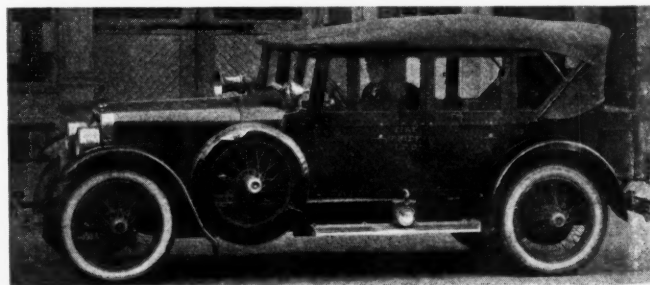
"And another angle to it showed up this morning," reflected Uperly. "That car that Suthers will buy from the president of the golf club is one car that will not come to us as a trade in." Uperly heaved a sigh of relief. It wasn't such a bad old world after all when once you got your eyes open. And Uperly awoke to another fact, that his prospect file might turn in some

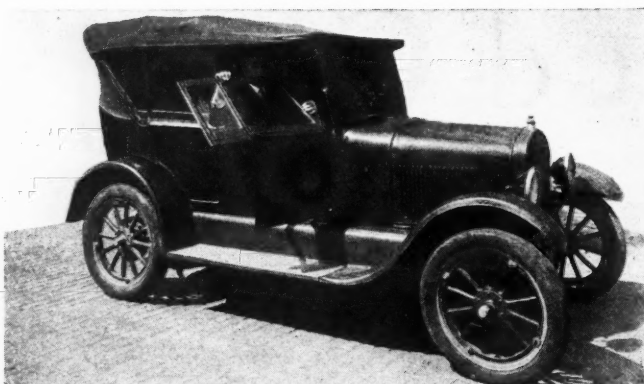
(Continued on next page)

Roadsters and touring cars of 8 low priced cars are made snug for the winter with these enclosures at prices from \$33 to \$50



The concern which supplied this enclosure to the fire chief makes enclosures for all cars, having approximately 300 different patterns. Prices range from \$60 to \$135





Ease of application is here illustrated in an enclosure made for 8 low to medium priced cars. List prices run from \$37.50 to \$65

real business if he sent out a letter telling what he had to offer in good open cars equipped with enclosures.

* * *

Every dealer in automobiles has to face squarely the problem of selling not only used cars, but also used open cars which have lost some popularity on account of the preponderance of publicity and advertising devoted to the closed car. It has been estimated that on January 1, 1927, there will be some 20,000,000 passenger cars registered of which number 12,000,000 will be open models, most of which will pass through the used car sales rooms at some time or other.

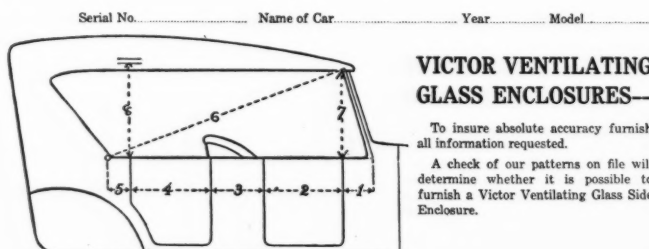
To sell winter enclosures to purchasers of these cars is a certain source of profit. When the car has been taken in, its value in relation to the cost of the enclosure should be considered.

Protection from the elements and comfort in winter driving are the chief sales appeals of the enclosed model and these same advantages can be offered to used car purchasers if winter enclosures are merchandised during the coming season. Many who would like to buy a new closed car can not afford to do so and these are prospects for the open model with an enclosure.

Enclosures alone can also be sold to those who continue to drive their open cars and where financial conditions limit cash sales, it is also possible to sell on a time payment basis. Local conditions will determine to some extent whether this is advisable, and it will also

(Continued on page 32)

Some manufacturers can quickly supply enclosures not carried in stock if the dimensions of the car are given as indicated in this form



- FOR ROADSTERS USE NOS. 1-2-5-4-7
- 1—Distance between center of windshield line and edge of front door.....
 - 2—Width of front door.....
 - 3—Distance between front door and rear door.....
 - 4—Width of rear door.....
 - 5—Distance between center of top iron and rear edge of rear door.....
 - 6—Distance between center of top iron and center of top of windshield post.....
 - 7—Distance from top of front corner of front door to top of windshield post.....
 - 8—Distance from top of rear corner of rear door to lower edge of bowssocket.....

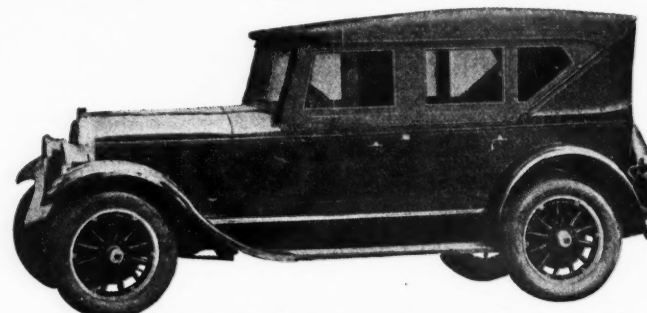
VICTOR VENTILATING GLASS ENCLOSURES—

To insure absolute accuracy furnish all information requested.

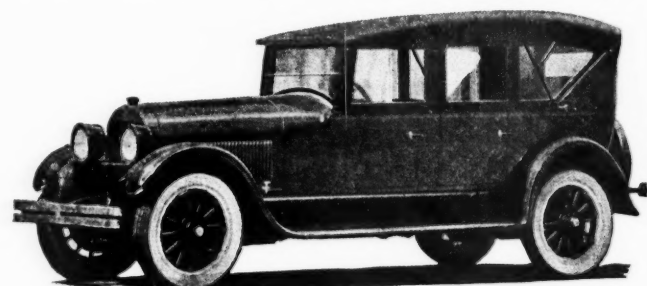
A check of our patterns on file will determine whether it is possible to furnish a Victor Ventilating Glass Side Enclosure.



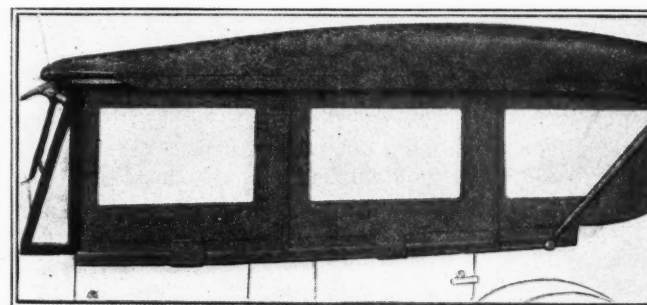
This enclosure is made for Chevrolet, Ford, Star and Dodge Brothers at prices ranging from \$24.75 to \$53.35



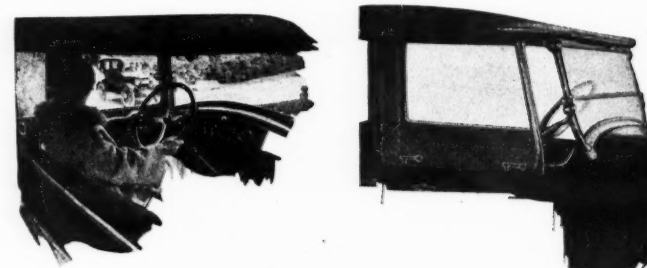
\$33.50 to \$66.50 is the list price on these enclosures which are available for approximately 20 different makes of cars



This enclosure sells for \$27 and \$36 for the Ford roadster and touring, the corresponding prices for Chevrolet being \$36 and \$45. For all other cars the prices are \$48.75 and \$82 for two, five and seven passenger cars



This enclosure uses curtains which roll up into the top. The illustration shows curtains lowered. The most popular makes of cars are provided for at prices ranging from \$32.50 to \$75



A high degree of visibility is claimed for this enclosure, the sections of which are quickly removable and are held in a container at the back of the front seat. Made for about 25 cars at prices ranging from \$35 to \$99.75

This Courtesy Car Plan Pays

*New Vehicles Rented to Maintenance Customers While Their Own
Are Being Serviced Helps to Increase Shop
Business*

By LLOYD S. GRAHAM

SINCE the beginning of the automobile business owners have complained about the time lost in the use of their automobile while in the repair shop. There is no doubt that many cars have gone to the scrap heap much earlier than would have been the case had their owners paused in their use of them long enough to give them the proper care.

In an effort to overcome this disagreeable factor in servicing cars the Nash-Buffalo Corp., 25 Jewett Ave., Buffalo, N. Y., retailer and distributor of Nash cars, has put into successful operation what it calls its "courtesy car service." The plan was developed and put into its present form of operation as the idea of S. F. Swain, the president of the company.

Under this plan any Nash owner who brings his car to the service department at 25 Jewett Ave., for any servicing whatsoever that is likely to take time from a few hours to several days, has a car placed at his disposal for a nominal charge.

The service is proving highly successful in different ways. At first it was thought that two cars would be sufficient to take care of the demand, but a third was placed in commission almost immediately and they are in use practically all of the time.

The Nash Light Six sedan is used for the purpose and only new cars are used in this service. It is contemplated that the cars will be sold after being in this service for three months, so that in this way new cars will be in service practically all of the time.

A minimum charge of \$2.50 is made for the use of the courtesy car on this basis: \$1.00 an hour for the first two hours and fifty cents an hour thereafter. Or, if the customer is to have the car for one day or longer, a flat charge of \$5 a day is made.

It is stated that customers use these cars for various

INTRODUCING THE COURTESY CAR SERVICE

"Anything Short of Everything Is Not Enough"

Frequently, while cars are being extensively repaired or overhauled, Nash Owners find it very inconvenient to be without the use of their automobiles. Often the wish has been expressed by owners—"If I only could have the use of some one's car for a day or two."

This wish is now gratified through the introduction of "The Nash Courtesy Car Service." Now the professional or business man or woman who must have the use of a car daily can have it.

After a long study of the situation, both here and elsewhere, we are pleased to announce that on June 1st the service, which is completely described on page 8, will be available.

Three Brand New Nash Light Six Sedans, fully equipped, will be used at the start; more if needed later. The fee for this service is very reasonable. The service is rendered without profit, and merely as an added convenience for Nash Owners.

The service attendants at the door will gladly give you any additional information that you may wish, and will cheerfully arrange for the use of one of these sedans for you at any time.

There is only one authorized Nash Service Station in Buffalo and that is located at 45 Jewett Avenue. To take your car elsewhere is apt to be expensive and, in addition, it cancels the factory warranty on your car.

Nash Buffalo Corporation

SERVICE PLANT
45 Jewett Ave. at Main St.
Phone, Crescent 5000

Buffalo, N. Y.

RETAIL SHOWROOMS
Main at Northampton
Phone, Tupper 8242

Advertising the courtesy Car Service

This Is A Copy of Our Courtesy Car Agreement

The undersigned acknowledges receipt from the Nash-Buffalo Corporation of one Nash automobile Model 21, serial equipped with spare tire, tube, and cover, bumpers, motometer, bar cap and full set of tools, which automobile has been rented by the undersigned from the Nash-Buffalo Corporation, and for the use of which rental is to be paid on the following basis:

For the use thereof for two hours or less at the rate of \$1.00 per hour.

For a period of more than two hours, at the rate of fifty cents per hour, provided that if car remains away from Nash-Buffalo Corporation for more than ten hours, rental is to be paid on the basis of \$5.00 for each calendar day.

Said car is to be delivered to undersigned with a full tank of gasoline, and upon return of said car to Nash-Buffalo Corporation the undersigned agrees to pay, in addition to the amounts specified above, for sufficient gasoline to fill the tank to capacity, the same as delivered. Gasoline to be paid for at the current prices then in effect.

Said car is rented by me, the undersigned, as a courtesy for use while my car is being repaired for a period of by the Nash-Buffalo Corporation and I agree to take proper care of same and I further agree that, should the car be damaged in any way while in my possession, whether my fault or not, that I will pay for the parts and labor necessary to repair same in the Nash-Buffalo Corporation Service Station at the then current rates.

It is understood the liability insurance carried by the Nash-Buffalo Corporation does not protect me while using said car and I also agree to hold the Nash-Buffalo Corporation free from liability in case of any accident-either to myself or any one else while I am using said car.

Signed.....

Address.....

Witness.....

*Copy of contract signed by customers
who rent the courtesy car*

has not been damaged. During the first month of operation of this system none of the three cars was damaged by the courtesy car drivers.

It must be understood that the plan is not operated as a money-making proposition but is just what the name implies. It is hoped that the amount of money taken in on each car during its term of service will cover the depreciation so that the total sum of these charges plus the ultimate price obtained for the car

lengths of time ranging from a few hours to a week. The latter is the longest any car has been out on this service. The average time that a courtesy car is out in the service of any one patron is one day.

Dealers' license plates are not used on the cars. Permanent licenses are taken out in the name of the Nash-Buffalo Corp., and all of the cars are adequately covered by fire, theft, liability and collision insurance.

At the time each car is taken out, the tank is filled with gasoline and the amount of oil is at the proper point. When the car is returned, the tank is filled with gas, oil is added, if necessary, and the cost of replenishing these supplies is added to the bill of the customer.

When a customer takes a courtesy car he signs a contract form which has been drawn up carefully by the attorney for the Nash-Buffalo Corp. to protect it under the New York state laws. In this contract form the rate is stipulated, the regulations regarding the charge for gasoline and oil are mentioned, and the customer assumes responsibility for any damage that may result in any form from driving the car while it is in his possession.

When the customer returns the car, he is given a release from this contract after a mechanic has given the car a brief examination and is certain that it

(Continued on page 22)

Putting

Precision and Transmission

The Complete Overhaul of These Units Is an Important Maintenance Job and One That Can Be Sold with Profit to the Shop and Satisfaction to the Owner

By C. EDWARD PACKER

Reaming Ford transmission bushings. The use of the jig for holding the drums and triple gears in alignment with the reamer assures an accurate job



This series of articles on important maintenance jobs will be continued in following issues of Motor Age. Articles will be published on the following subjects:

Overhauling the Rear Axle and Differential.
Brake Relining and Servicing.
Tire Service.
Battery and Electrical Service.
The New Paint Job.
Oiling and Greasing and Selling Lubricants.
Towing and Wrecking Service.
Selling and Installing Accessories.
Radiator Service.
Body and Fender Work.
Servicing the Front Axle and Steering Gear.
Automobile Glass Replacements.
Articles already have been published on the following subjects:
The Automobile Laundry—Sept. 16.
Valve Grinding and Carbon Cleaning—Sept. 23.
Reconditioning the Engine Units—Sept. 30.

WHEN a car starts off with a series of leaps like a startled jack rabbit or when the gears refuse to stay in mesh the time is at hand when the transmission and clutch in that car must be serviced. A service salesman or contact man who is on the job can frequently draw customers into conversation regarding such matters and point out the advantages of having such conditions corrected at once.

A slipping clutch, in addition to reducing the pulling ability of a car, causes the lining to wear out very rapidly and at the same time produces considerable heat. Some clutches that are badly worn also have the faculty of producing a very annoying rattle. Under certain conditions and in the course of time the shifter rod and plungers in the transmission as well as the transmission gears may become so worn that the transmission will slip out of gear when the engine is pulling hard. Such a condition is not only annoying but dangerous. Of course, it is inevitable that there will be a certain amount of normal wear. However, there are many matters that contribute to produce excessive wear.

Speed in and Clutch Service

FOURTH Article in the "Equipped for Profit" Series.

EQUIPPED FOR PROFIT

Overhauling Clutch and Transmission

Following is the special equipment that is essential in handling transmission and clutch service in an accurate manner that pleases the customer and at a speed that produces profit.

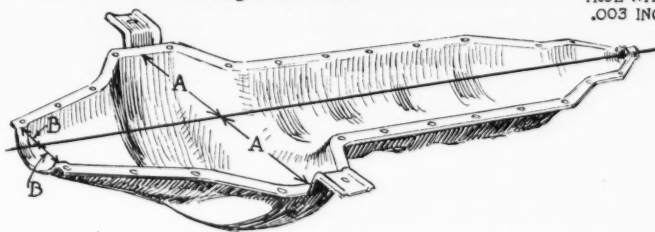
Chain hoists, horses, cleaning vats and speed wrenches have been listed in preceding articles. In addition to these the articles here listed are most essential:

Dial indicator and universal attachment\$15.00 to \$17.50
Clutch Puller 10.00 to 12.00

For servicing the Ford transmission and clutch the following will be needed:

Complete set of transmission
reamers with drum and gear
holders\$75.00 to \$90.00
Transmission clutch disk drum
puller75
Bendix shaft head puller..... 1.00
Transmission driven gear puller.... 1.50

Testing Ford crankcase for alignment by measuring to the edges from a string or wire stretched through the center

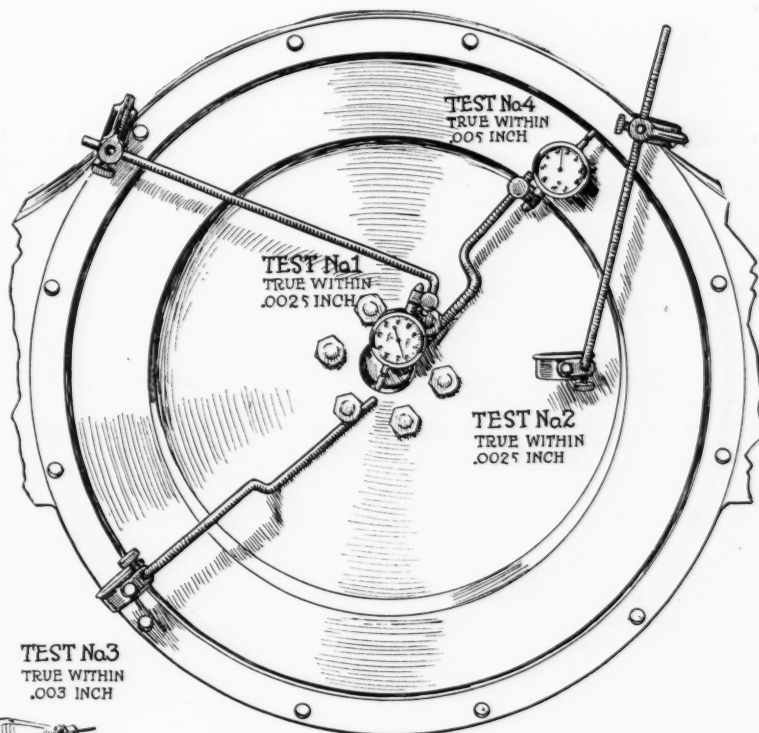


The manner in which the car is handled has a very direct bearing on the length of life of the clutch and transmission. Driving with one's foot resting on the clutch pedal imposes a slight dragging force on the clutch with the result that there is rapid wear of the clutch release bearing and throwout yoke with slippage and wear of the clutch linings.

Clashing of gears produces excessive wear of the front edges of the teeth. Clashing is sometimes the fault of the driver and again it may be due to improper clutch adjustment. Failure to keep the clutch adjusted, where adjustment is provided for, is one reason for premature wear. By keeping the transmission bearings in adjustment the transmission gears are kept in proper alignment with the result that wear is reduced to a minimum and silent operation is obtained. Preventive service to these two units offers profits to the man who will take the trouble to call these matters to the attention of those who drive in for service on other parts of the car.

Lubrication of Transmission

It seems almost unnecessary to mention that the lubricant used should be kept at all times to the level recommended by the manufacturer and should be of the type particularly suited for the design of the transmission. In general the transmission lubricant should



Checking the flywheel and housing for accuracy. The dial gage makes this work easy and certain

coat, cushion and follow the gears and should not channel at low temperatures. The lubricant most generally recommended for this service is a heavy oil, similar to steam cylinder oil, that is entirely free from foreign matter of any kind. Foreign matter in a lubricant is objectionable for the reason that it tends to settle out and also may clog oil passages to bearings and thus cause them to run dry with the result that they would fail and cause the breaking down of the entire transmission.

Servicing the Clutch and Transmission

When the propeller shaft is connected to the rear of the transmission by means of the universal, the main shaft of the transmission becomes, in a sense, a part of the propeller shaft. Consequently, if the propeller shaft does not run smoothly, but tends to whip at high speed, it will cause bearing trouble in the transmission. Damage of the slip joint where the propeller shaft enters the universal joint will impose undue strain that the transmission bearings are not designed to withstand, with the result that trouble will develop.

When servicing the transmission, the shop should protect its reputation and assure the customer of proper performance by checking into those matters which have a direct bearing on the performance of the clutch and transmission.

As a general thing, it will be found most convenient to remove the clutch and transmission by dropping the assembly down from the car. This eliminates the likeli-

(Continued on next page)

Flat Rates for Clutch and Transmission Work

The following flat rates for transmission and clutch work are based on labor charges of \$1.50 an hour. Should local conditions make it necessary to alter these figures it can be done as follows: for labor at \$1 an hour multiply the figures by .67, for \$1.25 multiply by .87 and when selling labor at \$2.00 an hour multiply by 1.33.

Car	Over-haul Clutch	Over-haul Transm.	Overhaul Clutch and Transm.
Buick	\$11.50	\$11.00	\$18.50
Cadillac	13.75	14.75	21.75
Chandler	12.80	12.80	20.50
Chevrolet	7.50	6.25	9.50
Chrysler	8.50	9.00	12.50
Cleveland	8.00	8.80	9.20
Davis	9.00	15.00	24.00
Dodge	12.00	14.75	18.75
Durant	4.20	7.20	7.50
Essex	9.00	10.50	14.00
Ford (These operations never sold separately)			14.00
Hudson	9.00	10.50	14.00
Hupmobile	7.75	8.50	12.25
Jordan	13.75	16.00	18.75
Moon	8.50	7.50	13.50
Nash	11.25	12.50	18.00
Oakland	4.00	7.00	10.75
Overland	7.50	9.00	12.00
Packard 6 and 8	10.50	13.50	19.75
Peerless	10.75	16.75	20.00
Rickenbacker	7.50	9.75	11.75
Star 4 and 6	4.20	7.20	7.50
Studebaker	9.00	14.00	16.00
Willys Knight	12.00	12.00	16.50

(Continued from preceding page)

hood of damaging upholstery. The first thing to do, therefore, is to hoist the front of the car and securely block the wheels. As it is necessary in most cases to pull the rear axle and drive shaft assembly back, it is not advisable to hoist the car any higher than is necessary to just give comfortable clearance for a man to work on the underside. With the brake rods disconnected and the rear axle and drive shaft drawn back so that the connection as the universal is broken, one should remove all the nuts of cap screws that hold the transmission housing to the flywheel housing, using care to support the assembly so as not to throw undue strain on the last bolt to be removed or to jam any part as the assembly is taken off.

The entire assembly should then be taken to a work bench for further attention. By means of a special clutch puller the clutch plate assembly

should be removed from the clutch shaft. The use of pinch bars and hammers for removing this part is sure to cause trouble in the bearings of the transmission. With the clutch plate group removed, the balance of the assembly can be dipped into the cleaning vat and thoroughly cleaned before proceeding further with work. Before placing the assembly in the cleaning tank the filling and drain plugs of the transmission should be removed so that the transmission case will be thoroughly cleaned out.

After 15 or 20 minutes, hoist the transmission and clutch assembly from the cleaning tank and flush off thoroughly with hot water, turning the transmission housing back and forth so that water on the inside can drain out freely.

Disassembling and Inspecting

In Fig. 1 the places where wear takes place and the condition under which it takes place most rapidly are outlined and it is well to keep this diagram in mind when servicing the clutch and transmission. Frequently a mechanic takes down the parts of the clutch and transmission and then hesitates to use material that is really necessary to put them in first class condition. This is shortsighted in two ways. In the first place the customer does not get the right kind of job and in the second place the shop loses the profit from the parts that should be installed. Most of the inspection of the different parts will be visual. Worn shifter rods and plungers are frequently the cause of gears refusing to stay in mesh and when worn to any extent should certainly be replaced.

As the bearings are removed they should be disassembled, if of the separable type, and the rollers or balls should be closely examined for chipping or cracks.

If the bearings are of the ball type and cannot be taken apart they can be thoroughly cleaned in gasoline and dried off with compressed air and then rapidly revolved while held between the fingers. Bringing this whirling assembly close to the car will make it possible for one to hear any irregularity that may exist in the balls or races.

Gears that are badly worn or that show signs of considerable wear on the front of their teeth should be replaced. In the clutch it may be found that the driving plates have cut into the splines of the driving drum or into the posts that carry the plates, depending upon the construction. When there is no eccentric

Special Attention Each Part of the Ford Transmission Should Receive

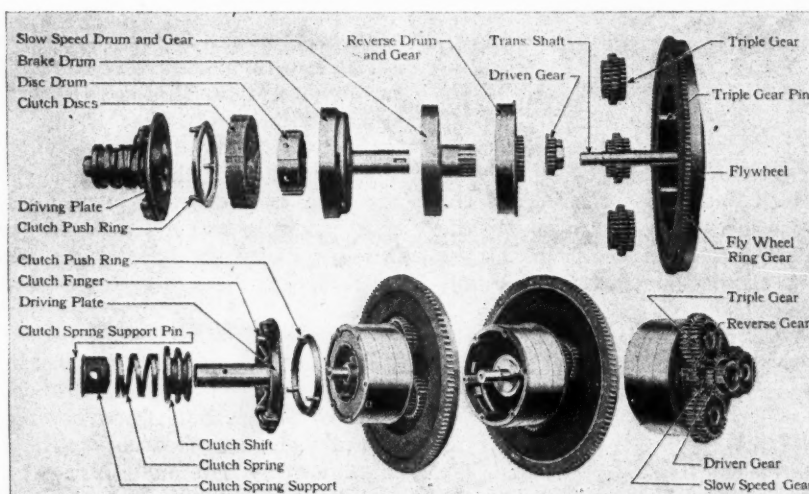


Illustration from Ford instruction manual.

Driving Plate—Should be rebushed and oil disk inserted.

Clutch Push Ring—Three push pins should be tight.

Clutch Discs—Should be clean and true. Replace cracked disks.

Disc Drum—Replace if disks have worn into splines.

Brake Drum—Surface should be smooth. Interior splines should not be cut into by clutch disks. If otherwise O. K., rebush.

Slow Speed Drum and Gear—Surface should be smooth, gear free from wear, then rebush.

Reverse Drum and Gear—Surface should be smooth, gear free from wear, then rebush.

Driven Gear—Teeth should be free from excessive wear.

Transmission Shaft—Inspect key-way for looseness.

Triple Gears—If teeth are free from excessive wear rebush.

Triple Gear Pins—Must be tight in flywheel.

Flywheel Ring Gear—Replace if badly worn.

action in the clutch these parts are very slow to wear, but if there is any misalignment the plates will cut into the carrying members. The result of such wear is that the clutch refuses to disengage properly. Similarly, attention should be given to the fit of the driven plate or plates on the splines of the clutch shaft.

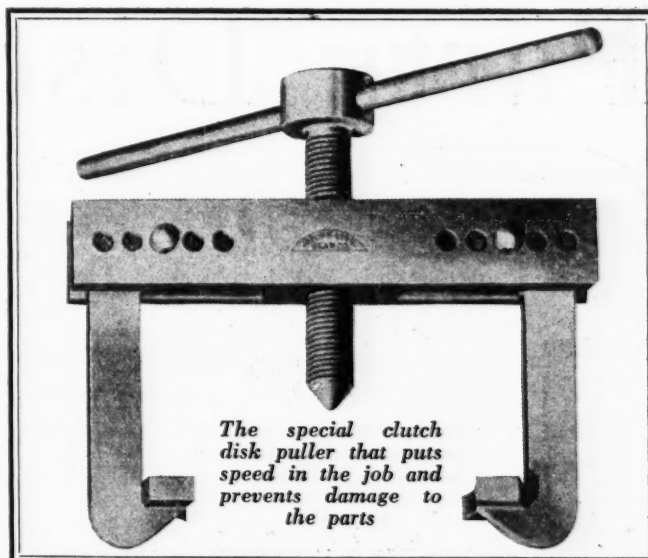
Ford Planetary Transmission

Satisfactory service from the Ford transmission is also dependent upon proper adjustment and alignment. It is assumed that the servicing of the Ford is generally understood so only some major problems are considered here.

Servicing of this unit differs considerably from servicing the transmission and clutch of gearshift cars. The main service work that is performed in the Ford transmission is rebushing of the drum and triple gears. Much of the other service consists of replacement of badly worn parts.

To obtain proper alignment this rebushing should only be done in jigs that hold the reamer in proper line with the part that is being worked on. To attempt to ream a drum or triple gear without the aid of an aligning jig is inviting trouble.

The clutch plates should all be cleaned and inspected. Plates that are scored or cracked should be replaced. Before reassembling the clutch the splines on the inside of the brake drum that carry the clutch plates should be examined. In time the plates cut into the splines and if this has taken place the brake drum must be



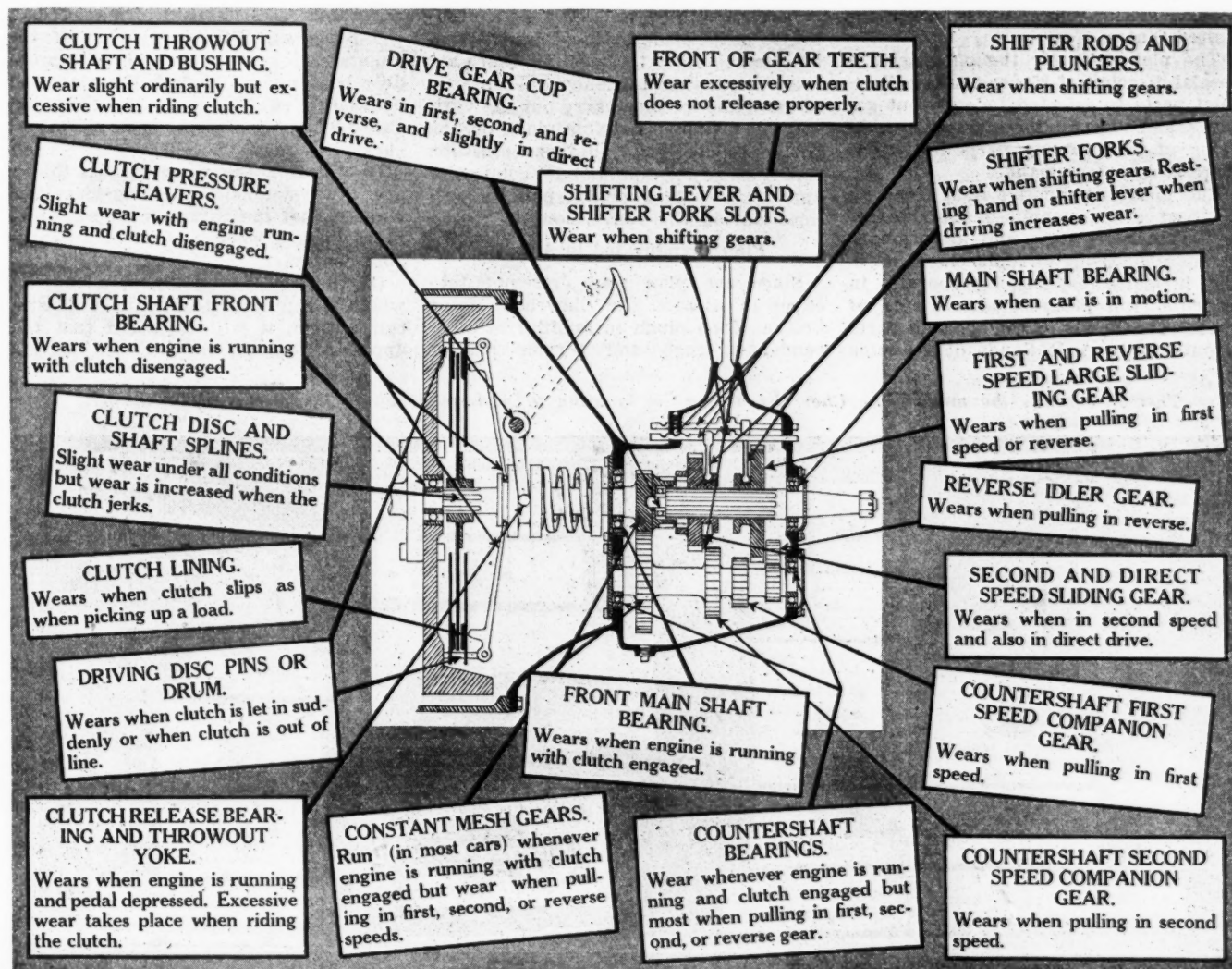
The special clutch disk puller that puts speed in the job and prevents damage to the parts

replaced, as such a condition would make the clutch drag. This is often the cause of Fords creeping ahead when being cranked. Similarly, the clutch disk drum that is keyed to the transmission shaft should be inspected and replaced if worn.

Alignment of the transmission and clutch with the crankshaft in the gear shift type of cars has been

(Continued on page 32)

Schematic Diagram of Clutch and Transmission Showing When and Where Wear Takes Place



Parts Discount Plan

G. S. D. 474

THIS CARD NOT TRANSFERABLE

No. 1X Date _____

Issued To _____

At _____

Special Discount Card

for Economical Transportation

Who is entitled to a special discount of 25% from list price on all purchases of genuine Chevrolet parts. This card will be honored by all direct Chevrolet dealers when presented at time of purchase of parts.
This card may be recalled at any time.

Expires Dec. 31, 1927 (OVER)

*Independent Garages and Dealers
Who Are Approved by Com-
pany May Buy at 25 Per
Cent Off from Any
Authorized Dealer
or Branch*

By LEWIS DIBBLE

The blue card is the 25 per cent discount card which the Chevrolet Motor Co. issues after approving the independent garage or service station. There is a space on the back for the holder's signature

A NEW plan for the distribution of replacement parts, which has been adopted by the Chevrolet Motor Co., is drawing wide attention from independent dealers and service station operators all over the United States.

The plan calls for the offering of a special discount of 25 per cent on Chevrolet parts to selected independent garages, and also for the attractive packaging of fast moving parts for which there is a large demand.

The plan is indicative of a trend on the part of automobile manufacturers to devote more time and attention to the merchandising of replacement parts and, in many respects, incorporates in principle the progressive methods of the merchandising of replacement parts as outlined by A. R. Sandt, of the sales

division, General Motors Corp., during the Factory Service Managers Forum of the National Automobile Chamber of Commerce, held in Detroit, June 15-16.

During the convention the principal topics revolved around the growing importance of service and the necessity on the part of automobile manufacturers of broadening their outlets for their service parts. To accomplish this, it was quite generally expressed that the manufacturer should encourage the independent dealer and service stations to use parts made by the original manufacturer. Since the meeting, there has been a growing tendency on the part of manufacturers to carry out the various suggestions, and this move on the part of Chevrolet is another indication that the larger automobile companies approve the fundamental policies outlined during the convention.

Plan Inaugurated in August

Since the plan was first put into effect in August, the Chevrolet Motor Co. has done much to familiarize independent garage and service station

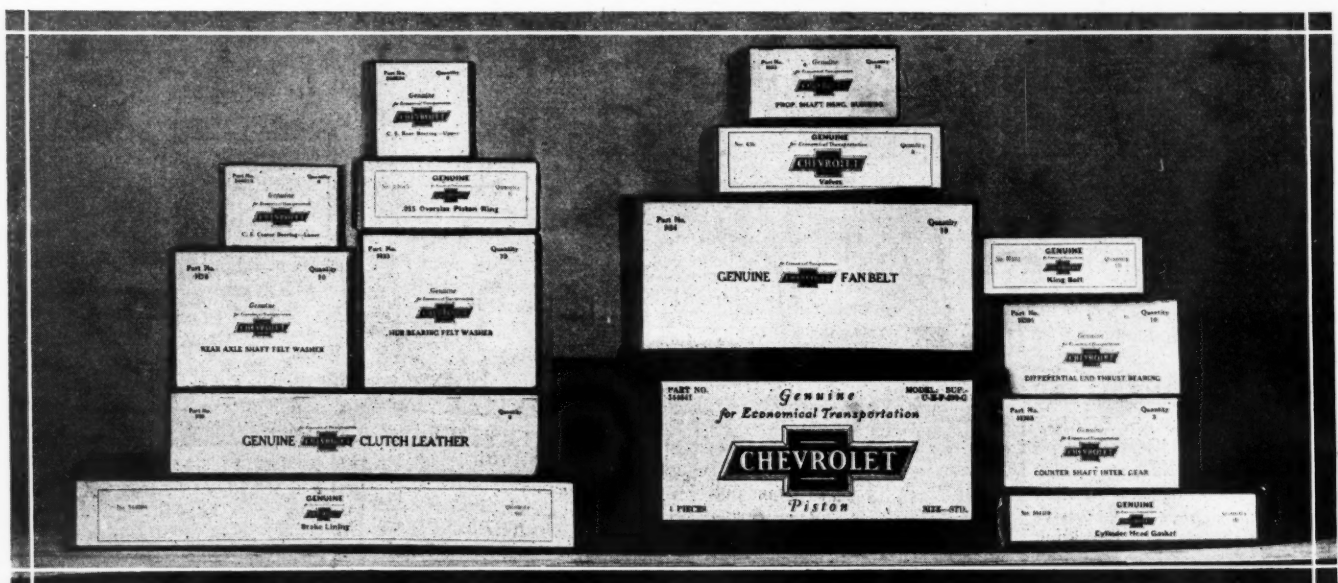
operators with it. Letters calling attention to the plan, and a standard application blank for the discount privilege, were circularized to approximately 39,000 garages throughout the United States.

Thousands of replies have been received and each is being carefully checked up by the factory representatives working in the company's 34 zones. To date, 2,886 garages have been issued the discount cards, and, according to J. P. Little, manager of the parts and service division of the general sales department, it will probably be January 1 before the plan will be in full effect, due to the time and care required in making each individual survey.

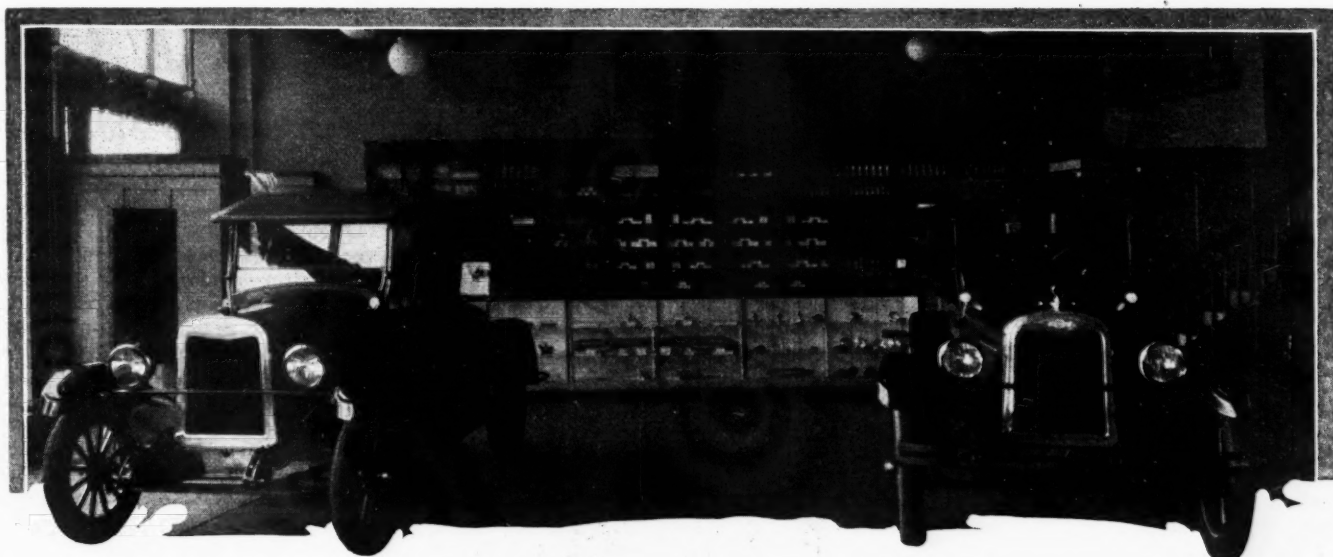
In granting the permits, two things are always taken into consideration, namely, that the garage must be working 6 days a week, and is of a reputable character.

On the application blank, a copy of which is reproduced in connection with this article, it will be noted that the applicant designates the size of his

This view shows the method the Chevrolet Motor Co. is using to package genuine Chevrolet replacement parts



Instituted *by* Chevrolet



Packaged replacement parts as put up by the Chevrolet Motor Co. lend themselves for display purposes in showrooms. This view shows attractive showcases exhibiting replacement parts which are incorporated in dealer showrooms.

establishment, his tool equipment, number of mechanics employed and whether or not he operates on a flat rate or hourly basis. The applicant also promises to use only genuine Chevrolet parts in the repair of Chevrolet cars and that he will not sell the parts at a price to exceed the published list price.

Three various factors have been kept in mind in working out this new policy.

First: Independent garages that service Chevrolet automobiles and obtain the approval of the Chevrolet Motor Co., will be issued a permit entitling them to a 25 per cent discount on genuine Chevrolet parts which may be purchased from any Chevrolet dealer or factory branch. This move, it is believed, will greatly stimulate the purchase of genuine Chevrolet parts by independent garages and service stations which heretofore have used parts obtained from outside sources because of more attractive discounts.

Second: Increasing the sale of parts to the independent garage will automatically open up new fields for the regular Chevrolet dealer for it will put him in a position to make a reasonable profit on much of the parts business which through circumstances has heretofore been diverted to outside independent sources.

Third: The plan, by stimulating sales, will increase

the volume of business for the parts department of the Chevrolet Motor Co., and will mean that the original manufacturer of the car will be gaining a larger proportion of the replacement

This shows a standard application blank for the discount privileges. 39,000 of these have been sent to garages throughout the country

business.

The plan has no complicated workings. Independent garages may make application to the company and the latter, after conducting an investigation, can either approve or reject the application. When the application is approved, a blue card is issued entitling the holder to a straight 25 per cent discount on parts, purchased in quantities.

Previous to the adoption of the new plan the company recommended that dealers grant to all independent garages and service stations, a discount of 15 per cent. This left the matter entirely to the discretion of the dealer, with a result that it was not satisfactory for the very reason that it was followed by some dealers, while others varied the discount which they allowed.

In the new policy the company itself designates the garage entitled to the 25 per cent discount, which is good on any dealer. If necessary, the garage can get the discount from the Chevrolet warehouse direct. In cases where permits are not issued, the company still recommends that its dealers allow the 15 per cent discount as heretofore.

Dealer Gets Profit on Parts

Besides providing a more attractive and uniform discount to the independent garage to whom permits are issued the plan also makes

(Continued on page 32)

G. S. D. No. 473

APPLICATION FOR SPECIAL DISCOUNT ALLOWED TO SELECTED INDEPENDENT GARAGES AND REPAIR SHOPS

Date _____

I hereby make application for the special Chevrolet discount allowed to Selected Independent Garages or Repair Shops.

NAME _____ STREET _____

CITY OR TOWN _____ STATE _____ PHONE NO. _____

My garage comprises the following:

Show Room Size _____ Repair Shop Size _____

Stock Room Size _____ Car storage, No. cars _____

I employ _____ mechanics and repair an average of _____ cars per day, charging \$ _____ per hour.

I (do) (do not) use Flat Rate system.

I have the following tool equipment: _____

I am a (dealer) (sub dealer) for the following cars: _____

I have an agreement similar to this with _____

In return for the privilege of receiving the special discount allowed to Selected Independent Garages or Repair Shops, I agree to observe the following conditions:

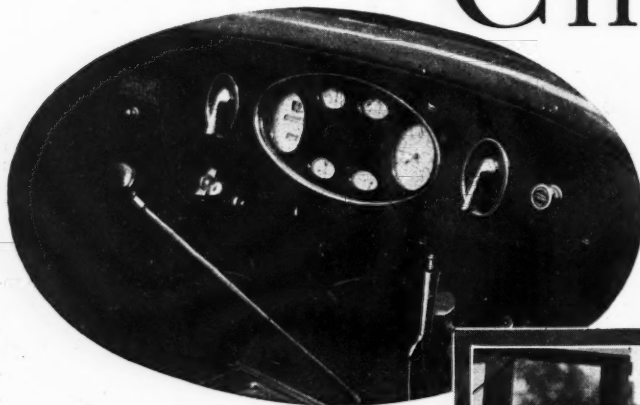
- (1) To use only genuine Chevrolet parts, purchased from Chevrolet dealers or Chevrolet Motor Company, or its affiliated Companies in the repair of Chevrolet cars.
- (2) It is understood the acceptance of this application does not give me any exclusive privileges of selling Chevrolet parts in the city or town in which I am located.
- (3) I will not use the name of General Motors Corporation, Chevrolet Motor Company, or its affiliated Companies, or the name of a Chevrolet dealer as part of my firm name or to designate my place of business without full authority of the parties interested.
- (4) I agree to sell all genuine Chevrolet parts purchased by me at not to exceed the published list prices for such parts. It is understood that all prices are subject to change without notice.
- (5) The discount card with which I will be presented if this application is approved is to be used by me subject to the following conditions:
 - (a) It is not transferable and will be presented only by the person authorized by me for privilege of parts discount.
 - (b) It may be taken up by any authorized representative of the Chevrolet Motor Company or its affiliated Companies, or branches with whom I have this agreement and declared null and void at any time.
 - (c) It automatically expires on December 31, 1927, or on December 31 of any succeeding calendar year for which issued, but may be renewed at the discretion of an authorized representative of the Chevrolet Motor Company, or its affiliated Company in charge of that territory.

APPROVED BY _____ NAME OF GARAGE _____

DATE APPROVED _____ SIGNATURE OF OWNER _____

The Finer Chrysler "70" and Lower

Sport Phaeton with Rigid Side Curtains Is Striking Addition to Line



Instrument board on new Chrysler "70" models. Clock is standard equipment

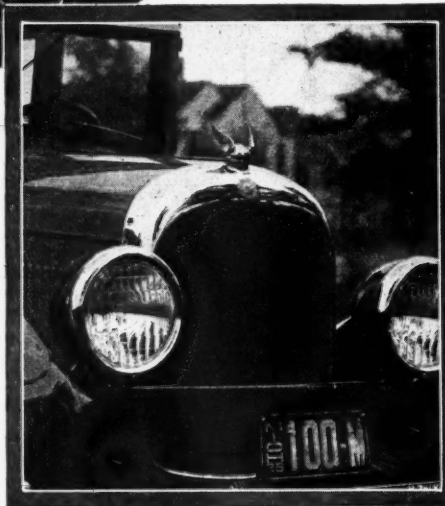
New radiator, higher and wider, is used on Chrysler "70" closed cars

NEW styles in body designs, lower prices, and the introduction of deep section tires on 18 in. diameter wheels, mark the announcement of the new "70" series Chrysler cars. Compared with the corresponding models of the previous series, the price reductions range from \$30 to \$220.

A new style sport phaeton modeled along European lines, a 4-passenger coupe and a cabriolet, are the three entirely new bodies which have been added to the "70" line, while the regular coach and sedan models of the previous series are discontinued. The line of nine bodies and the comparative prices of the "Finer Seventy" as the new series is known, are as follows.

	Old Price	New Price	Reduction
Phaeton	\$1395	\$1395
Sport Phaeton	New	1495	New
Sport Roadster	1525	1495	\$ 30
Brougham 2-door.....	1745	1525	220
Royal Coupe 4-pass.	1695	1545	150
Royal Sedan.....	1795	1595	200
Crown Sedan.....	1895	1795	100
4-Pass. Coupe.....	New Prices Not announced		
Cabriolet.....	New Prices Not announced		

Aside from the new wheels and a slight modification in the piston design,



gravity slightly over $\frac{1}{2}$ in. The new tire and wheel sizes in conjunction with flatter springs and the new roof lines of the closed cars are responsible for a decrease of $2\frac{1}{2}$ in. total in the height of the closed cars. In place of the conventional split-rim used with the 20 in. wheels of the previous series, the new cars employ one piece straight side Firestone rims secured by a locking ring and four rim belts on the artillery wheels.

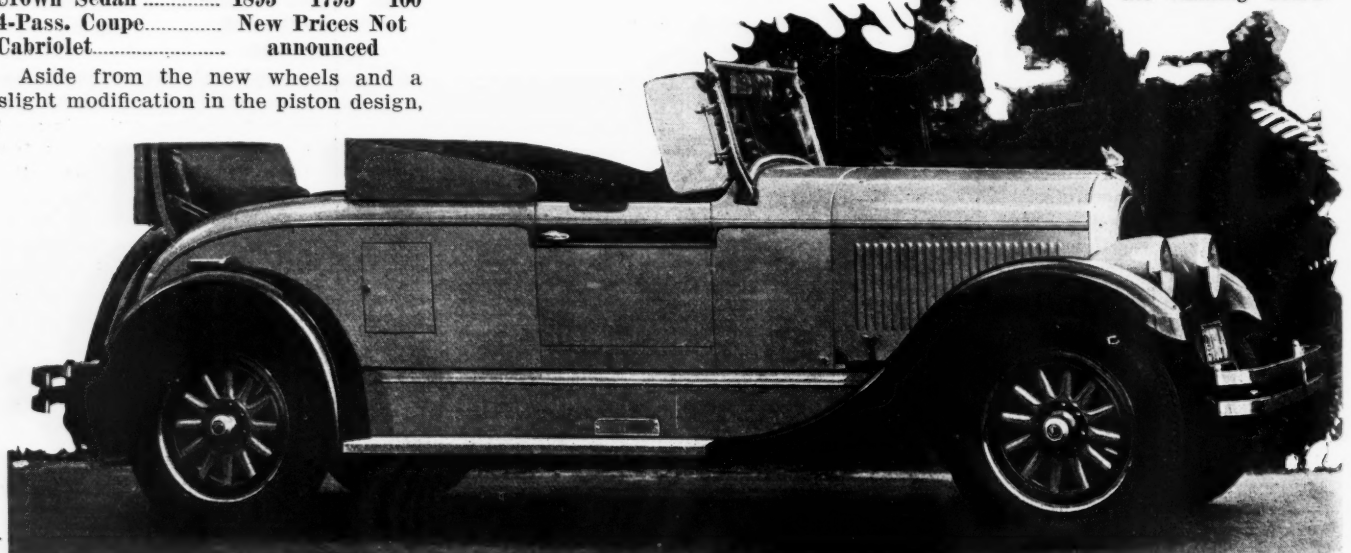
New Roof Lines

A decidedly custom built effect is imparted to the closed models through an unusual form of construction where the roof joins the windshield and by the method of carrying the body colors into the

there have been no mechanical changes in the chassis other than those incorporated from time to time as new developments are introduced.

Besides adding materially to the riding qualities of the cars, the new 18 in. diameter wheels mounting 30 by 6.00 in. Fisk tires have reduced the height of the cars and lowered the center of

Chrysler "70" sport roadster showing how the body color is carried down on the side splasher to the running board.



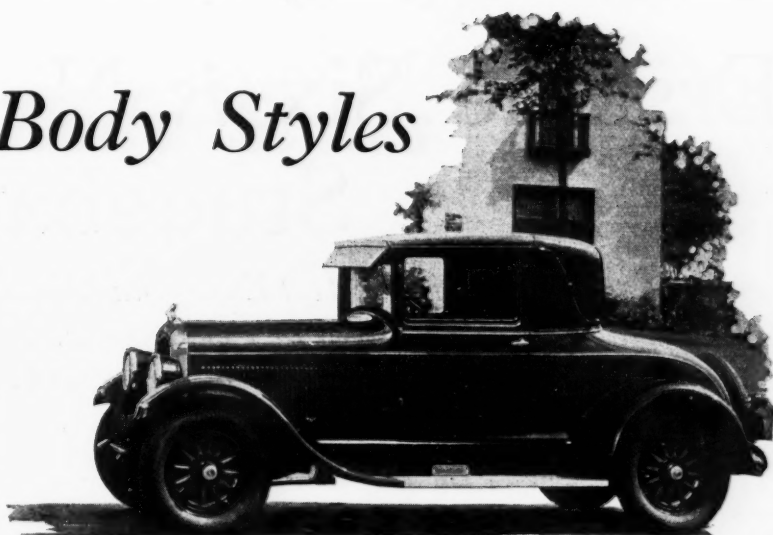
Offers New Body Styles Prices

By L. S. GILLETTE

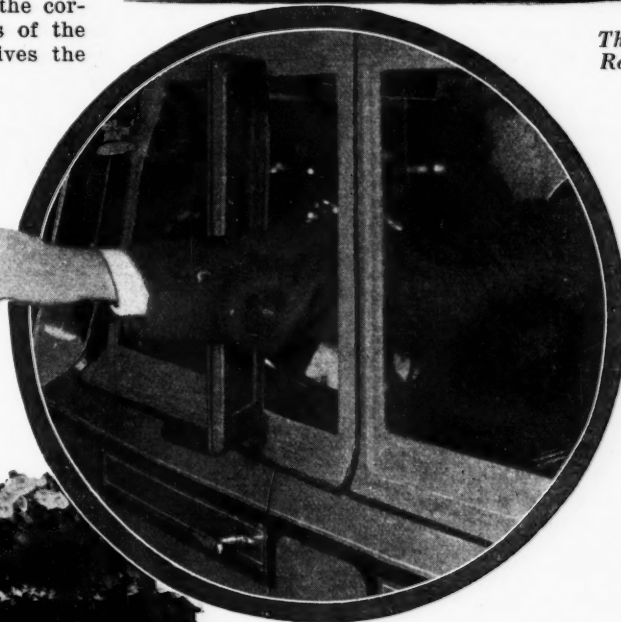
upper structure of the body, leaving a contrasting black reveal around the windows. The accompanying views of the cars show the roof line ends abruptly with a sharp edge directly above windshield and that the sun visor mounted below is short and set at an appreciable angle. This arrangement, together with the contour of the corner posts, which blends with the curves of the cowl and the front edge of the roof, gives the effect of a cadet's peaked cap.

In achieving symmetrical lines for the closed cars due to the lowering of the roof, redesigned fender contours on account of the new wheels and changes in the double belt effect, the radiator on these cars has been altered. It is now 1 in. higher and $\frac{3}{4}$ in. wider with the edges of the shell narrower and the curved top surface more rounded. On the open models with their lower lines, the radiator of the previous "70" series is retained. With the increased frontal area of the closed car radiators there has also been a change in the cellular cell construction. The Viking radiator cap emblem employed on the larger "80" series

New sport phaeton on Chrysler "70" chassis. The rigid side curtains, which are stored in back of rear seat, may be kept in place with top either up or down. This model lists at \$1495



The new Chrysler "70" Royal coupe listing at \$1545



Spring window for signaling is provided in rigid side curtains used on open sport models

is standard on the new "70" models. Headlights of the closed cars are slightly larger while the bullet shaped lights of the previous "70" line are employed on the Chrysler open sport models. In this connection the headlights are now carried on a new one piece cross fender support of tubular section.

There are two unusual features in connection with the introduction of the sport open models. Both these cars have the main body colors carried down over the side splashers to the running board, which appears to give increased length to the car, and also rigid side curtains of a new type are adopted. Following the European custom of touring, the phaeton model is designed so that the rigid side curtains may be used when the top is folded, thereby allowing the passengers all the advantages of an open car without the possibility of discomfort from side winds and draughts. These

(Continued on page 32)



Erskine Six is New Studebaker Product

*Light Car Built to Meet European Ideas of Economy and American
Ideas of Performance Is Exhibited
at Paris Salon*

THE Erskine Six, a new small car manufactured by the Studebaker Corporation of America is being exhibited this week at the automobile salon at Paris, France.

The new car is made in a sedan at \$975 and a touring car at \$895, both prices f.o.b. Detroit.

The Erskine Six has been built to meet European ideas of economy without sacrificing in any way American standards of performance and comfort. Its lines, aspect and general design and appearance are Continental. It introduces many refinements which bespeak engineering ingenuity.

This car is the direct result of a visit made by A. R. Erskine, president of The Studebaker Corporation, to the last Paris Salon held in October, 1924. At that time Mr. Erskine had gone abroad to make the acquaintance of European manufacturers, inspect factories, call upon Studebaker dealers and generally study conditions and the trend of motor car design on the Continent.

Long in the Making

On the evening of October 10, 1924, a dealers' meeting and banquet was held at the Restaurant Langar in the Champs Elysees. Studebaker representatives and dealers were present from all parts of Europe, eager to express their ideas as to the ideal car for the Continental market.

When the banquet closed, Mr. Erskine had secured for the Studebaker engineering staff a descriptive composite for the ideal European car. But the greatest task still lay ahead. Out of



A. R. ERSKINE
*President of Studebaker Corporation,
for whom new car is named*

the fabric produced by the ideas of Studebaker's European dealers the automobile itself had to be fashioned; and to European ideals of economy had to be added American ideals of performance and comfort.

During the twenty-four months which have elapsed (no Salon having been held in 1925) Studebaker engineers and

management have developed the car that is formally presented at the Paris Salon this week. It was christened the Erskine Six by the directors of Studebaker, as a tribute to Mr. Erskine's 13 years as Studebaker's chief executive.

The principal factors underlying the design finally adopted were economy of fuel consumption, minimizing the horsepower tax and duty which applies in various countries; the beauty of carroserie; the price; and of course, performance and dependability.

Rating Is 16 Horsepower

The Erskine Six is a low-hung car with a body designed by Dietrich. The 6-cylinder 2½ litre engine is of the L-head type. It has a 66.6 m.m. x 114.3 m.m. (2½ in. x 4½ in.) bore and stroke, with 146.1 cu. in. or 2394.6 c.c. displacement. According to the formula of the R.A.C. and N.A.C.C. its rating is 16.54 hp. Mechanical internal expanding 4-wheel brakes are standard equipment.

Under test conditions The Erskine Six is said to deliver 28 miles to a gallon of gasoline and to attain a speed of 60 miles an hour. It will turn in an 18 foot radius.

Two types of bodies are shown—a sedan and a touring phaeton—both for five passengers. The car is only 67½ inches in over-all height but affords plenty of leg room. The sedan body is of steel construction—full visioned type wide windows and narrow pillars.

The hood and cowl are of especially attractive design, suggestive of the smarter European cars, yet entirely distinctive.

This Courtesy Car Plan Pays

(Continued from page 13)

after its three months of service, will equal the price of the car new. It is not expected that the amount charged will cover the cost of the constant servicing, the insurance and the incidental expenses necessary in maintaining such a service.

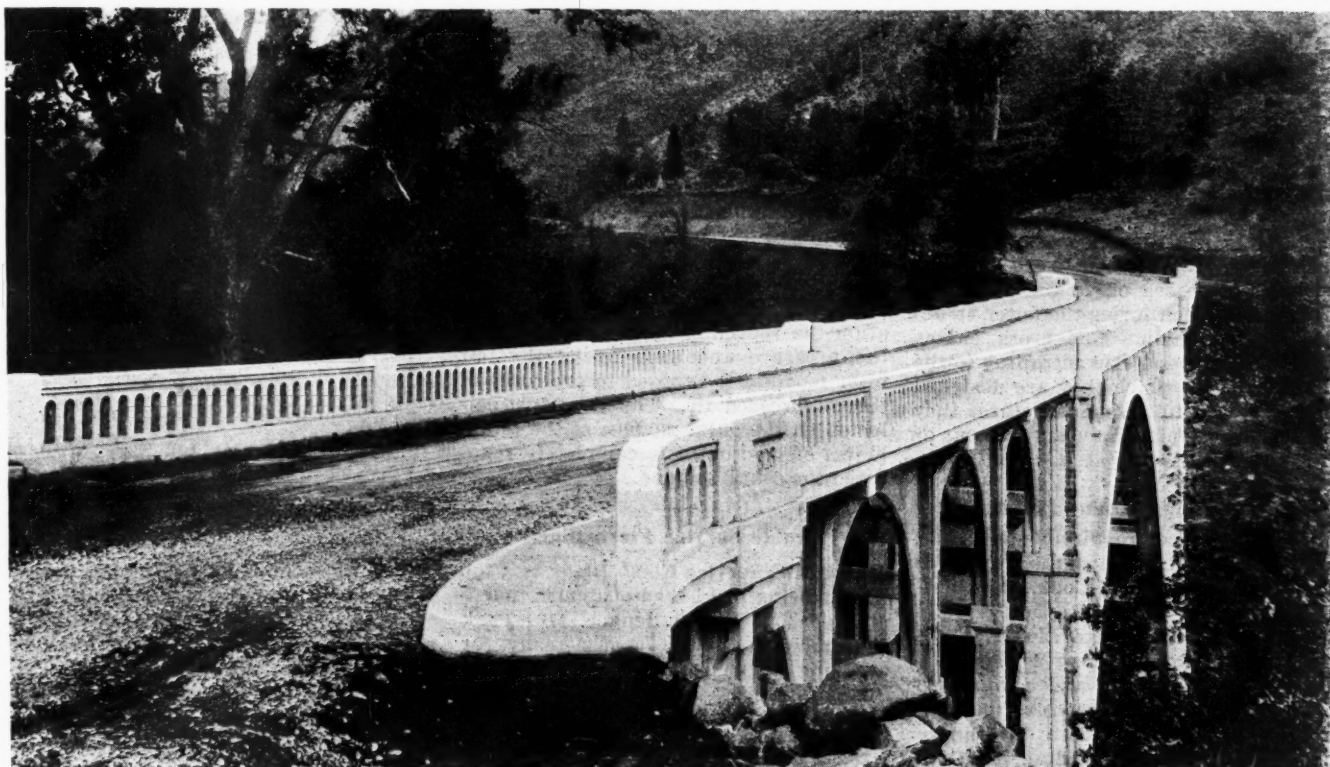
A thousand Nash cars were sold in Buffalo in 1925 and it is predicted that fully one-third more will be sold this year. Many of the owners are professional men, such as doctors. Many salesmen use Nash cars. This service was designed primarily for these classes and other men who depend on the daily use of their automobile for the successful conduct of their business.

Naturally the service is making a great hit among Nash owners and this factor of customer satisfaction is one which the Nash-Buffalo Corp. is very keen about.

But it is interesting to note that the results are twofold. It is also proving a splendid advertisement for the Nash Light Six. Therein lies the wisdom of using new cars only for this service. It is focusing the attention of many regular Nash customers upon the light model as a second car.

Many men who drive the courtesy car praise its performance highly when they return the car and take their own out. They talk about it with friends and in various ways the advertising which it is getting through use in the courtesy car service is proving to be a highly valuable form of exploitation.

Interesting Echoes from Motordom



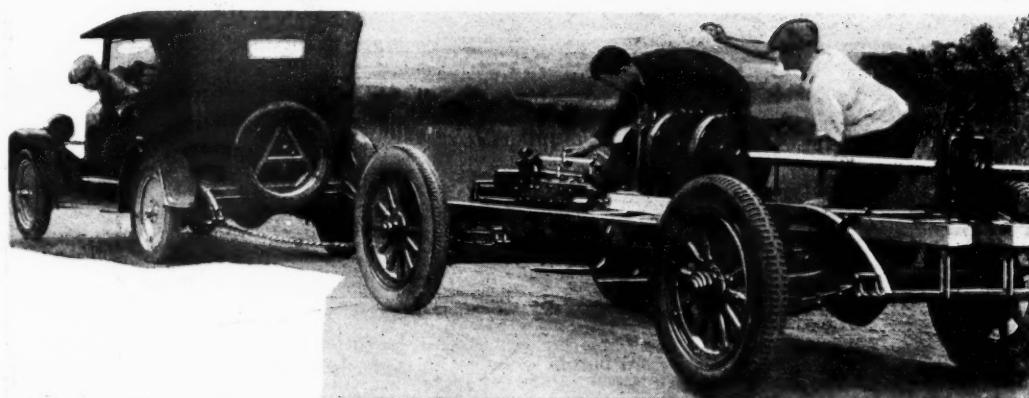
NEW CONCRETE ARCH BRIDGES on the Pacific Highway in northern California, built to shorten and straighten roads around canyon heads add greatly to the safety and comfort

of motorists. This one is 147 ft. long and 120 ft. above the creek with a 24 ft. roadway. The commissioners have found that bridges cost less than the paving otherwise needed.



LOUD SPEAKING CAUTION CAR being used by Detroit police to educate and reprimand driving faults of motorists. The passenger officer calls attention to the mistakes of the offending driver through the loud speaker which can be heard by everyone for a block around and is said to be more effective than arrests because of the publicity. The car is also used to give traffic talks.

DEMONSTRATING THE BALLOON TIRE and the way it absorbs shocks to a group of salesmen so that they can later use the idea in their sales talks representing the Pacific Nash Motor Company, San Francisco



1000 MILES UP HILL is what this Chevrolet must do before it is approved. The towing dynamometer can be adjusted to produce the conditions encountered on any hill while the car travels on a level road or track in the 1146 acre testing grounds of the General Motors Corporation

NEW SELLING SUGGESTIONS

Seeger Chains

SAFETY, convenience in attaching, quietness, longer wear and better traction are among the features claimed by the Seeger Chain Co., Washington, D. C., for its tire chain. These chains can be attached when the wheels are sunk in mud and without the use of a jack, as the chain does not entirely encase the wheel. The case hardened cross links are attached to steel collars which are pressed on to the 17 strand steel cable which forms the outer structure of the chain. The cross chains vary in weight and size according to the size of tire for which they are designed and according to the manufacturer they are easily replaced when worn or broken.

Gold Edge Brake Lining

IN order to meet requirements of bus, truck and taxi service, the Raybestos Company, Bridgeport, Conn., has perfected what is called Raybestos Gold Edge Heavy Duty Brake Lining. This is an asbestos brake lining woven oversize, especially treated and compressed to two-thirds its original size under a pressure of 30,000 pounds to the square inch. This, it is claimed, gives Gold Edge lining great density, smoother surface and longer wearing qualities.

Being heavily compressed, the lining requires little or no "breaking in" and its hard, smooth surface is less liable to pick up gravel and grit, or particles of steel from the drums. Long wear is claimed for it by the producers.

Protectomotor Air Filter

IMPROVEMENTS in the Protectomotor High Efficiency Air Filter are announced by the manufacturers of this product, the Staynew Filter Corporation, Rochester, N. Y. This installation for cleaning air that passes into the car-

buretor is declared to have been made even more effective than formerly by the addition of a new cleaning device which further improves and simplifies the filtering process.

The retaining bolt which secures the felt filter medium now is made in tubular form and pierced with holes for a cleaning air blast. The top of the bolt is arranged to receive an ordinary "free air hose." About once in three months the filter is given a thorough air blasting with a tire hose. During this operation the retaining bolt revolves before the pressure and each fin of the felt filter medium is exposed to the force of the compressed air. Thus, the dust collected on the outer surface of the felt is blown off and outfit is completely renovated for continued use.

Double Service Flexo Black

DDOUBLE Service Flexo Black is a top dressing and baked-enameled touch-up made by E. J. Ballenger, 1131 Park Avenue, Chicago. It comes ready for brushing on the surface requiring attention. Durability and quick drying are merits stressed by the maker. If applied outdoors to baked enamel surfaces and subjected to the rays of the sun it is said the finish will be dry in an hour. Seats and backs may be touched up with Flexo by cutting the Flexo one-third should be dipped sparingly, carrying the replenishment as far as possible each time before dipping again. Six hours outdoors should be allowed for drying such a job. Full directions are furnished with the container. The liquid is priced to dealers at \$2.50 a gallon and put up in 75 cent cans for retail.

Lyon Glass Display Rack

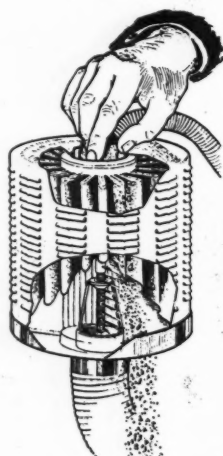
AUTOMOTIVE establishments handling replacement glass will be interested in a new steel rack for displaying glass in a manner to catch the eye of the car owner and serve as a reminder to him of a possible need that the dealer can supply. This rack is made by the Lyon Metallic Mfg. Co., Aurora, Ill. The rack is strongly constructed, being of steel. It has wooden floors and upright rods. An attention-arresting sign above the rack helps in the merchandising.

Apco Essex Horn Button

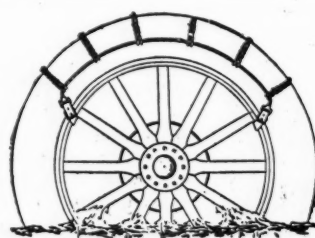
ASPECIAL offering for Essex owners has been put on the market by the Apco Manufacturing Company, Providence, R. I., in the Apco Center Post Horn Button for Essex Cars. The acorn nut in the center of the steering wheel is removed and the Apco button is screwed into place. Furnished with the button is an extra long wire for convenient connection behind the instrument board.

Grey-Lock Brake Lining

UNDER the name of "Grey-Lock" a material for brake lining and clutch facing is being marketed by the United States Asbestos Company, Manheim, Pa. The brake lining is sanded on the side which is placed next to the brake drum. This the manufacturer states, gives a smooth, close fit and will overcome as far as possible the picking up of dust and dirt, which makes high spots and causes squeaks. It is also claimed that this will facilitate the expulsion of water in wet weather and after washing, which will give a quicker braking effect in wet weather.



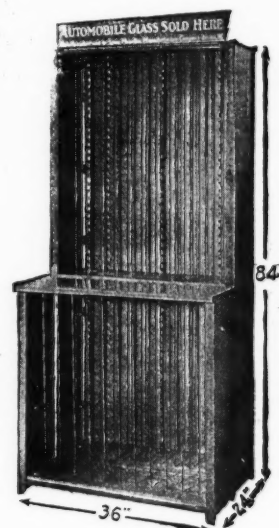
Protectomotor



Seeger chain



Apco Essex horn button



Lyon glass display rack

The READERS CLEARING HOUSE

Questions And
Answers



On Dealers
Problems

May Run 1000 Miles Before Parts Wear in

G.—I am coming to you for some information that I am unable to get hereabouts. Some time previous we rebuilt a 1924 DeLuxe model Jewett engine and it has not been satisfactory due to the fact that it consumes a quart of oil every 100 miles. This engine has never been exactly right since new and therefore it was rebuilt in an effort to make it right. There has been no complaint on the performance. The crankshaft has been reground, and all new bearings fitted. The cylinders were honed and supplied with Kant-Skore alloy pistons, new rings and pins. Rods were aligned and all other jobs performed that were necessary to make this engine first class in every way. To date we have used four different makes of piston rings in the order named, Perfect Circle compression and oil, piston drilled for oil regulation; Gill compression and Perfect Circle oil; Gill Servus compression and Gill economy oil; Quality compression ring and oil control ring; Richmond hammered compression and Gill oil ring. The cylinders were honed round and straight within .0005 in. Pistons had a clearance of .001 in. Rings had a clearance of .003 in. Oil pan screen was perforated for quick oil return. Valve timing correct to factory marks. Coil is in good condition and plugs do not foul. Collection of carbon in 250 miles causes a knock. The pistons used have three rings above the wrist pin hole. This car had a run in of six hours before going on the road and has now covered 1100 miles. All types and makes of rings showed good seat upon inspection. Do you think this type of piston could cause this grief?—C. R. Fisher, Fisher's Garage, 1101 Broadway, Dayton, Ohio.

In the very thorough work that you did on this engine you have eliminated so many possible causes for excessive oil consumption that there are very few things left to check up on. We have, however, seen jobs that required more than 1100 miles after being honed and new pistons fitted before the pistons, rings and cylinder walls were in such condition that oil consumption was to a minimum and compression to the maximum. We assume of course that you have been very careful in reassembling this engine to get all gaskets tight and that you have made sure that the engine is not leaking any oil.

We have also seen variations in oil consumption as high as 40 per cent with different kinds of oil but of course it is possible to get an oil that is too heavy which would reduce consumption but would not give your engine the lubrication that it requires. It sometimes happens that too light an oil is used immediately after an engine overhauling job, the reasoning being that

with all clearance reduced to the minimum it is necessary to have a thin oil to get into all frictional surfaces.

If the oil level is carried too high this will tend to increase the oil consumption considerably.

In this Jewett engine we have the forced feed system of lubrication which brings the oil under pressure to the main bearings and from which it continues under pressure through the crankshaft to the connecting rod bearings. In an installation of this kind if the connecting rod bearings are a little too loose or the shims not properly fitted the combination of the oil pressure plus the centrifugal force will cause an excess of oil to be thrown from the rod bearings. This will result in excessive oil on the cylinder walls and it is inevitable that under these conditions more oil will pass to the combustion chamber than would otherwise. This might account for the carbon accumulation which you state caused the engine to knock at the end of 250 miles, but we would be more inclined to look to the springs on the automatic advance of the ignition for if these are too weak the spark will advance excessively causing a knock very similar to that which accompanies an excessive carbon formation.

Suggestion for Keeping the Engine Warm

Q.—Here is a cold weather tip that should be of value. Practically all cars have louvers in the sides of the hood to assist in cooling the engine. In cold weather it helps to cut covers from ordinary cardboard or heavy brown paper and attach these on the inside of the hood. They can be pasted on or can be attached with cord or wire. Even on cars equipped with devices for controlling radiator and engine temperatures this suggestion is of value in keeping the engine warm and also aids in quickly bringing a cold engine up to efficient running temperature.—R. A. Armstrong, Director of Service, Oakland Motor Car Co. Pontiac, Mich.

SOME NOISE PERMISSIBLE

Q.—I should be pleased to have you give reason for the extremely great clear clearance on the Hispano Suiza valves.—George A. Mount, c/o E. F. Linenbach, Port Washington, N. Y.

We understand that the clearance for the exhaust valves should be .012 in. and for the intake .008 in. We do not believe you would consider this excessive in view of the high temperature at which aviation engines under constant load will operate.

Readers' Clearing House Index

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Planning Your New Building

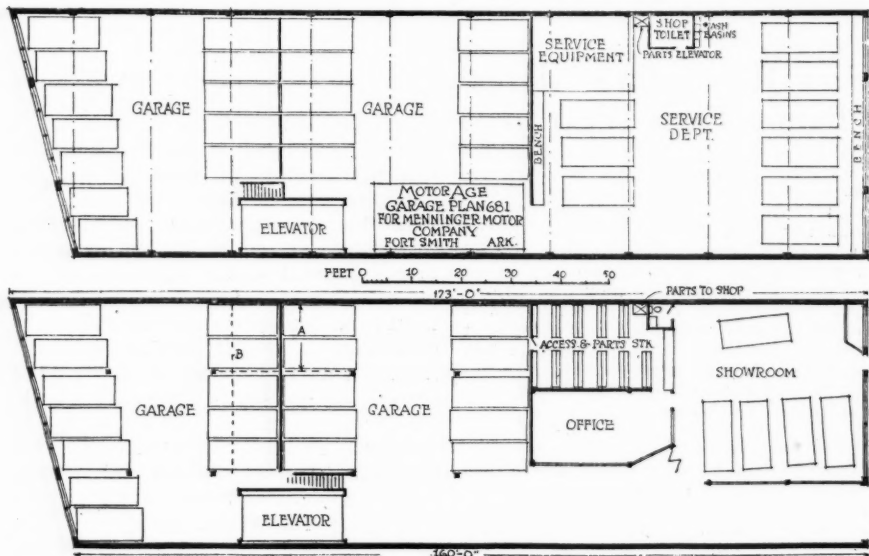
By Tom Wilder

Cost of Constructing Second Story on Old Building Excessive

Q.—We are enclosing herewith a drawing of our garage which is a one story building. We believe that we have given you as nearly correct as possible the exact dimensions of everything. We are anticipating building a second story and while we have our own ideas about how we would like to rearrange our present showroom, offices and parts room we feel that you are in a position and will pass to us some real suggestions as to which would be the most convenient way to build, bearing in mind that we wish to continue our present drive way and install an electric elevator instead of a ramp as we do quite a big storage and car washing business as well as Buick sales and service.—Menninger Motor Company, 1206 Garrison Ave., Fort Smith, Ark.

While you say you wish to use an electric elevator instead of a ramp two conditions exist which are in favor of the ramp. First, the rear part of your building is 4 ft. lower than the front part and it would be very simple to install a second floor over this section which would be 6 ft. or possibly 6½ ft. higher than the front part.

With a ramp from the lower floor to the main floor where the elevator is shown and a short ramp from the main



Although you favor an elevator we have suggested a ramp system which would fit your conditions very nicely and give your storage customers better service

floor to the floor just mentioned at the position marked "A" between the dotted line and the wall, then it would be very simple to build a third ramp above the lower one and extending from this intermediate floor to the second main floor. The second argument in favor of the ramp is the fact that you intend to handle considerable storage.

The ramp is the cheapest way to handle this business and it is also much quicker so that customers are much better satisfied.

Whether the elevator or the ramp is used, we would suggest enlarging the low section making it wide enough to store two rows of cars.

The shop of course would be moved to the second floor where it would have the benefit of skylights and better space.

The lower floor of course is suitable for garage purposes and we have also installed here the parts department in connection with the accessory store and have suggested a small electric elevator or dumb waiter which can be used to raise parts to the shop.

We do not know the condition of your walls, but would suggest that you have them examined by a competent builder before putting another story on them. In case they are light you could reinforce them with concrete piers well anchored to the old walls or heavy channels could be set in and bolted securely to the old walls so that they would carry the piers or pilasters built into the second floor wall to carry the roof trusses. We do not know also how your roof is supported at present but have suggested the placing of columns to support the second floor in case there are none at present.

It is generally a difficult job to build a second floor on an old building and it might pay to sell this building and build a new two-story structure, all new. In that way you would get a much better building without any greater expense.

READERS' CLEARING HOUSE

LEGAL QUESTIONS ANSWERED

By Wellington Gustin

SAYS YEAR WAS MISREPRESENTED

Q.—A young friend of mine recently decided to trade cars with me and after finding out that his Ford Tudor, motor No. 10775388 was a 1924 instead of what it was sold to him for (1925) he informed me that he still owed a \$140 note on his original purchase of it, although there is no mortgage on the car, the note being a separate obligation to the party from whom he purchased the car, as he paid cash in this manner.

I informed him that the difference I could allow between a 1924 and 1925 would be approximately \$85, so he and I would like information regarding the necessary steps to take in suing for that amount of credit on the note he owes.

He turned over the original bill of sales given him by the dealer from whom he originally purchased the car and also the car, as we have already traded, owing to the fact that there was no mortgage on the car. The bill of sale calls for a 1925 Ford Tudor although the motor number calls for a 1924. I think the dealer selling him the car should stand the loss and not the purchaser.—North Dakota Dealer.

The purchaser may sue for damages for breach of contract in delivering a

1924 car instead of a 1925 model as represented and sold. The proper amount of damages would be the difference between a 1924 and 1925 car of the kind purchased. What the amount may be is a subject of proof and evidence on the point will be required.

Another remedy would be to await the maturity of the note and then deduct the proper amount for damages, paying the balance. If suit be brought on the note the damages may be set up as claimed to defeat the action. By this method you have the advantage of being a defendant, putting the expense of starting the action on the seller.

Now if the seller anticipates this maneuver by you, he may dispose of the note and your claim of breach of contract is not available against holders of the note who are not parties to the original contract. Should the seller dispose of the note, you can bring suit directly for breach of the contract.

Answers to Readers' Questions

Timing and Lubrication On 1926 Packard

Q.—I would like to get some information regarding a 1916 Twin Six Packard touring car. The first question is: what is the firing order?—Thos. E. Bash, c/o Beher's Garage, Carthage, Ind.

The firing order is 1 right, 6 left, 4 right, 3 left, 2 right, 5 left, 6 right, 1 left, 3 right, 4 left, 5 right, 2 left.

What is the method for checking valve timing?

All of the valves should be adjusted with a clearance of .004 in. between the valve stem and pushrod. The intake valve opens 9 deg. after upper dead center and closes 35 deg. after lower dead center. The exhaust valve opens 45 deg. before bottom dead center and closes 4 deg. after top dead center.

How do you time the ignition?

With No. 1 piston in the right hand block coming up on compression continue to turn the engine carefully until the inscription "top dead center" cylinder No. 1 on the flywheel is $\frac{3}{4}$ of an inch past its highest point of travel. With the ignition in the fully retarded position the spark should then be taking place for No. 1 cylinder.

Describe the oiling system and let me know what oil pressure to carry and how to adjust it.

The sump of the Packard engine carries the oil supply as well as the oil pump with its regulator. The pump sends oil under pressure to all of the main bearings from which it passes through drilled passages in the crankshaft to the connecting rod bearings.

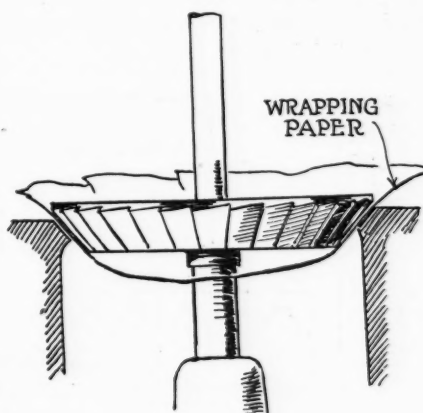
Steel Tubes in Connecting Rods

The connecting rods carry steel tubes which supply oil under pressure to the wrist pin bearings in the pistons. There is an oil passage connecting the front main bearing with the hollow camshaft and the oil under pressure at the front main bearing works up into and through this hollow camshaft, oiling all of its bearings. From the front camshaft bearing oil is also sent under pressure to the timer shaft bearing. The connection for the oil pressure gauge is made at the rear camshaft bearing. The oil working out from the connecting rod bearing as a result of the pressure and the centrifugal force is thoroughly atomized and distributed to those internal parts of the engine which are not supplied directly from the pump. The oil release valve contained in the pump body regulates the oil pressure which should normally be between 20 and 30 lbs. when the engine is warm and running at a speed of about 1,000 r.p.m., which is equivalent to a car speed of approximately 26 miles an hour. Obviously any such condition as a loose bearing would reduce the re-

sistance to the flow of the oil with the result that it would be impossible for the pump to maintain the proper pressure and in a case of this kind the oil release valve should not be adjusted in order to compensate for the loss of pressure through a loose bearing. However, should it become necessary to adjust the oil pressure this can be done by removing the plug which is in the oil pump housing on the bottom of the crankcase just forward of the flywheel housing. Inside of this plug will be found a lock nut which holds the adjusting screw. Loosen this lock nut and turn the adjusting screw to the right to increase the oil pressure or to the left to reduce the pressure. When the adjustment is completed be sure to tighten the lock nut securely before replacing the plug. If it becomes necessary to check for leakage at any of the bearings a pressure oil tank should be used to force oil through the system.

SHOP KINKS IDEAS That have been Found Useful

When reaming a valve seat it is sometimes found that the reamer will chatter. This can be overcome by taking a piece of brown wrapping paper somewhat larger in diameter than the reamer. The reamer guide is forced through the center of the paper and the reamer teeth then cut through the paper when the work is started. This seems to be quite effectual in preventing chattering.—S. E. Archibald, 109 N. 9th St., Olean, N. Y.



Readers of MOTOR AGE are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published \$2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.

Oil Gets By at Side of Pump Gears

Q.—Advise why we cannot keep up the oil pressure on an Oldsmobile 6-30 1925 model. This engine has a pressure oiling system, oil being supplied by a gear pump mounted on the front of the gear case and driven by extension of the camshaft. The oil is forced through a hollow camshaft and feeds to each main bearing through an oil duct, in the web of crankcase, and then through hollow crankshaft to each connecting rod. We have tightened up all main and connecting rod bearings, tested out oil line, also checked by-pass, but cannot get engine to hold pressure. We have also tried new oil pump. The pressure holds until the engine gets warm and then drops down. The writer prides himself on overcoming trouble and would appreciate your advice in this matter.—Geo. W. Tunncliffe, Suite 7, Bell Block, Saskatoon, Sask., Canada.

The first thing to check is the side clearance of the oil pump gears. To do this remove the pump. The gasket which goes between the pump body and the timing gear case is supposed to be from .006 in. to .008 in. in thickness. Accordingly the gears should extend beyond the body of the oil pump about .004 in. To check this place a straight edge or scale or bar of steel across the face of the gears and then use a thickness gauge between the extension of the bar and the side of the oil pump body. If the clearance is more than .004 in. carefully file the face of the oil pump body until you get the gears to extend only this amount. The thickness of the gasket above mentioned will then give sufficient clearance.

Another possibility is that one of the Welch plugs is loose. These will be found in the throws of the crankshaft. Tapping with a hammer will tell whether the plugs are loose or not. After the crankshaft has been drilled at the factory these plugs are used to stop up the openings that are not needed. If the above suggestions do not enable you to overcome the trouble you should drop the engine oil pan, remove the pump and force oil through the camshaft. A mechanic under the car using a drop light can then see how the oil leaks at the various bearings. It should drip slowly from all and not come in a flood from any one.

CLEAN OUT THE JETS

Q.—We have a Chevrolet model K that seems to have carburetor trouble. The engine idles properly but when stopping or throwing out the clutch the engine always chokes if you do not speed it up. What is the cause?—Chevrolet Questioner.

We believe that there is dirt in the low speed jet. We would accordingly recommend your taking the carburetor apart and removing both jets to make sure that they are both clean.

Clearing Up Electrical Troubles

A Spark But What Kind of a Spark

Q.—I have an Overland four cylinder 1917 car on which I have ground the valves and set them at .004 in. clearance. Is this correct?—Louis Peugk, 931 E. Mechanic St., Bethlehem, Pa.

You do not give the model. On model 83 and 85 the valve clearance should be .012 in. This applies to the four cylinder model 85. On the six cylinder model 85, on model 86-D and 75-D the clearance is given as from .002 in. to

Edited By A. H. Packer

and laid it on the engine and got a spark it does not prove anything because the spark might jump in the open air and would not jump under compression with spark plug put back into the cylinder. You may have the wires reversed at the ignition coil. You can check this with the diagram. If you get the coil wires wrong you may have current going through the coil and through the interrupter, but you may not have the condenser connected across the interrupter points. This would mean that the condenser is not working at all and you would get a very faint spark at the spark plug and a big flash inside the interrupter at the interrupter points.

HOW TO WIRE UP A COIL

Q.—When you know the internal circuit of any ignition coil, how can you connect it so as to get the condenser across the interrupter points and be sure that the circuits are right.—Chicago Mechanic.

The first thing to do is to use 110 volt test points with the lamp in series with one lead and locate the primary, secondary and condenser. It is also advisable to make a diagram for yourself so that you can see clearly what the circuits really are. After the diagram is made you will always find that there is one terminal which is connected to both the primary and condenser. This terminal should always be connected to the insulated terminal of the interrupter. The other end of the primary winding will then go to the ignition switch and the other end of the condenser will go to the other interrupter point. If the other interrupter point is grounded, it is only necessary to ground the second condenser terminal.

Ignition Repaired with Stronger Spring

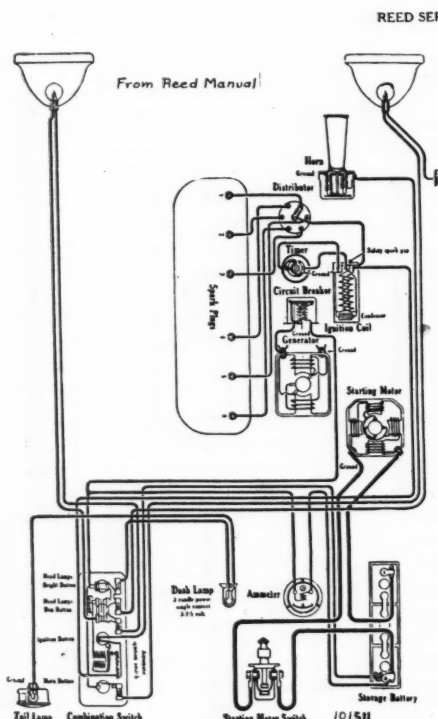
On page 30 of July 22, 1926, issue of Motor Age there is a clearing house article in which Mr. D. W. Griffith mentions having trouble with a 1923 Chalmers which misses at high speed. At one time I owned an old Chalmers and for some time had trouble with a scattering miss that showed up as soon as the motor reached about 65 per cent of its maximum speed, and this happened under any condition such as no load, or low, second or high speed gear. The carburetor adjustment does not make any difference. As you know the Chalmers engine was of rather high speed for its day, so I set the interrupter points so that they opened only on the very point of the cam, so as to allow the coil a longer period in which to build up its flux.

I then corrected the timing of the ignition for the new adjustment. This helped greatly so I knew I was on the right track. In looking over my ignition parts list I saw both a light and heavy spring for Remy breakers. This was Greek however, to all the "experts." A spring was a spring to them, no more and no less. I then took the spring out of the breaker and put a kink in it to make the tension greater and found that the miss was gone, once and for all.—F. J. Schaifer, 1909 W. 62nd St., Los Angeles, Calif.

CIRCUITS OF AN ORPHAN

Q.—Can you furnish complete wiring diagram for an Elgin Six, series H, 1919 model?—Norman H. Seibel, 2033 College Ave., Davenport, Iowa.

Wiring diagram of this Elgin car is supplied in accordance with your request.

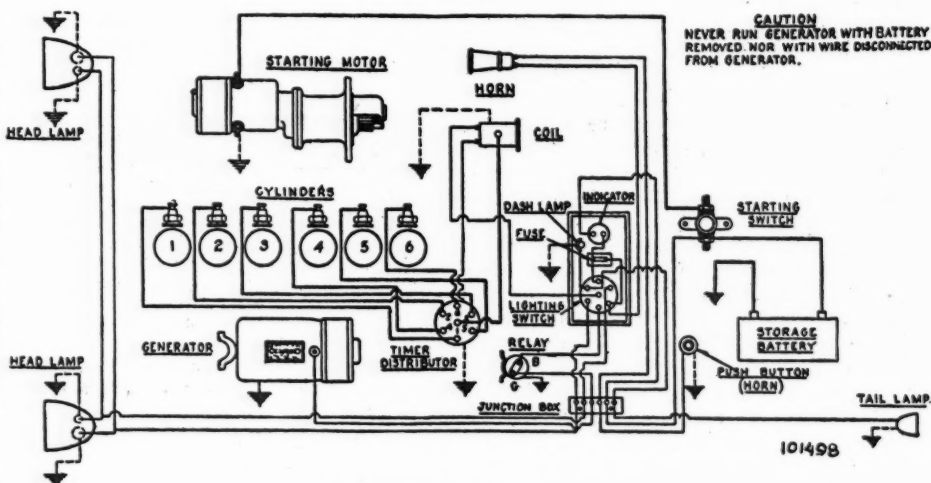


Wiring of Overland models 85-86

.003. This is in accordance with specification tables we have. We believe this latter clearance is somewhat small, however. In any event you should check up with the engine hot to make sure that expansion has not left the valves with no clearance whatever.

I have removed carbon and tried to start the car but it will not start. Have set spark plug points and saw to it that there was a spark at the plugs and at the high tension wire. I would like your opinion on the trouble. There are three wires leading from the coil and also another lead which is the high tension lead, making a total of four. This is an Auto-Lite system and I would like to have a diagram.

We are showing a wiring diagram of this car. You do not say what kind of a spark you got. If it will not jump $\frac{1}{8}$ of an inch from spark plug wire terminal to the engine, then the spark is weak. If you merely took a plug out



Wiring diagram of series H Elgin

Clearing Up Electrical Troubles

Make More Money With a Bigger Outfit

Q.—I have a Simms Huff motor generator from a Maxwell car, this machine being one that used a regulator. I wish to make a constant potential charging outfit from it using a resistance in series with the shunt winding and using the series field if it will help. What voltage should I use on the series and shunt windings? What is the maximum output and at what speed?—E. J. Harris, Northwestern Garage, 2213 Lowry Ave., No. Minneapolis, Minn.

The machine is not suitable for constant potential but can be used to charge one or two batteries. If you wish to do more than play with battery charging and expect to do some real business, however, it would pay you to get a good charging outfit. You do not say what car this was taken from. In 1917 the motor generators with regulator charged at 6 volts and were capable of producing 15 amperes at 1300 r.p.m. On the 1918 and early 1919 cars a straight 12 volt system was used for both starting and generating and this machine charged a 12 volt battery at a 7.5 ampere rate at 1700 r.p.m.

With the 12 volt machine you could charge two 6 volt batteries connected in series and with the 6 volt machine you could charge two 6 volt batteries connected in parallel. You would have to provide a motor drive of about ½ h.p. You would need a cutout for the proper voltage and would connect from the large generator terminal to the "G" terminal of the cutout. From the battery you would run a wire to the "B" terminal of the cutout and you would connect the other battery terminal to the frame of the generator. It would then be necessary to connect a small coil of iron stove pipe wire between the small field terminal of the generator and the large generator terminal to complete the field circuit. The speed and the amount of iron wire would determine the charging current. An ammeter could be connected between battery and cutout.

WHAT BURNS OUT THE BULBS?

Q.—What other condition other than a poor connection between the generator and the battery or a defective battery would cause lights to burn out? Would poor connections at the light sockets cause the trouble and why? How does a discharged battery affect the generator output? Does a high charging rate tend to burn out bulbs? Will a fully charged battery increase the generator output?—Wisconsin Reader.

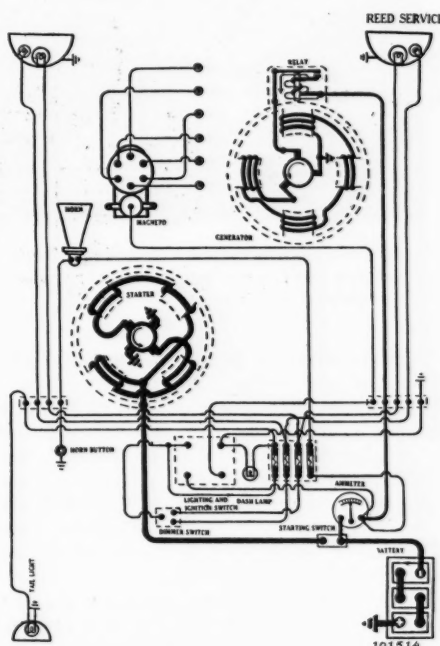
While you refer to a poor connection causing lights to burn out we would mention that they are not confined to loose connections. Frequently a connection that is mechanically tight is elec-

trically poor, offering abnormal resistance to the flow of current because of paint, rust or corrosion. A poor connection at the light socket will reduce the amount of current that goes to the bulb and consequently can not be the cause of lights burning out. On a third-brush generator the output varies with the voltage of the circuit. As the field strength of the generator increases with a rise in voltage and drops with a reduction in voltage so the output of the generator is greater when the battery is fully charged than when it is entirely discharged. A high charging rate is accompanied by a higher voltage both at the generator and at the battery. Any abnormal resistance in the charging line under these conditions is particularly serious because of the extra rise in voltage of the line in order to overcome the resistance. The result is excess voltage at the bulbs with consequently a shortened life. Tightening lamps to prevent breakage from vibration, keeping the battery at about 1.250 specific gravity, and the charging rate normal, will, with all connections good prevent the premature burning out of bulbs.

MERCER WIRING DIAGRAM

Q.—We have a Mercer sport touring 1923 for which we would like to have a wiring diagram.—U. S. Jackson, P. O. Box 253, Hollidays Grove, W. Va.

The diagram is published herewith as requested.



Used separate generator and starter in 1923

The Sparks We Know Can't Jump This Far

Q.—I am having trouble with a Cadillac Model 61 on which the sparks jump from the plugs to the top of the engine. At times the spark will also jump from one plug to another. This does not occur continuously, but when it does we have a miss. Have checked all wires and find them O. K. and have found connections tight. Spark gaps are O. K. and breaker points are set at .015 in. as per Cadillac instructions. We are afraid this spark might start a fire.—John Monroe, 520 Hamilton Ave., Allentown, Pa.

We do not wish to appear skeptical but from what we know of electricity it seems unlikely that the spark could jump from one spark plug to another when these are several inches apart. This is due to the fact that the greatest voltage generated in automobile ignition is only sufficient to send a spark from ½ to ¾ in. at the most and many coils which are operating satisfactorily will only send a spark about ¾ in.

If the spark plug gaps are set at .025 in. and there are no cracks in the porcelain and no appreciable carbon deposits on the insulator, then it is easier for the spark to jump the proper gap than it is for it to go at any other place. The only exception is when on a damp morning there is moisture on the surface of the spark plug insulator. Then the spark will leak through the moisture on the surface and get to ground or the frame of the engine that way instead of jumping the gap.

May Kill the Ignition

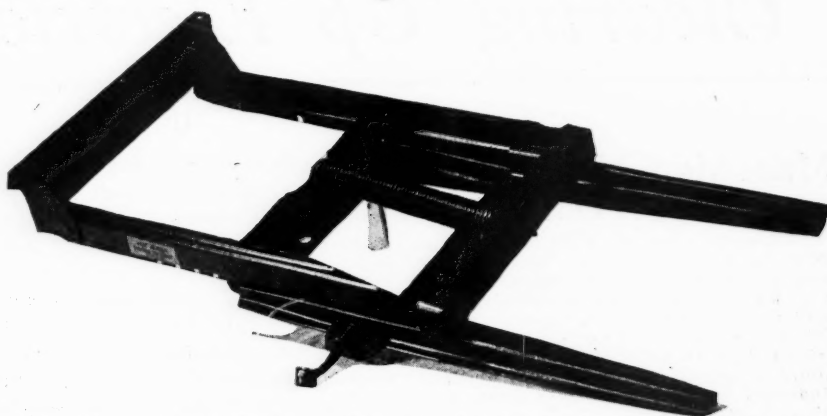
In some cases we have heard of radiator anti-freeze compound, which when vaporizing would deposit on the spark plug insulators and form a conducting path for the spark. We can figure no reason for the spark jumping from one plug to another. If the rubber covered spark plug wires have their insulation broken or cracked, then there is the possibility of the spark getting from one wire to another and jumping at the wrong plug, but not at the outside of that plug. The tendency for the spark to jump at the wrong plug is due to the fact that where the spark should go there is gas under compression and this takes about six times the voltage necessary to jump the same gap in the open air or in a cylinder where there is no compression. One thing you might check is the position of the high tension rotor in the distributor. This should have the contact button touching one of the inserts in the distributor cap just as the interrupter points start to separate.

New Adjustable Seat for Coaches

SEVERAL novel features are embodied in the movable seat for two-door five-passenger closed cars just placed on the market by the Van Auken Co., Pontiac, Mich. While of the sliding variety, the seat may be tilted forward and in this position the roller tracks fold up with the seat and eliminate any protrusions on the floor. This unit, which may be applied to the pres-



This view shows the Van Auken seat frame installed in a two-door five-passenger car. The seat is in almost the fully forward position, leaving plenty of room for the other passengers to enter the rear seats without disturbing the front passengers



Here the seat frame is shown with the spring almost closed and with the seat carried to the maximum forward position. This view shows clearly the knob which by pulling out and releasing provides several different settings in the 8 in. of travel the seat provides

ent front seats of most two-door five-passenger cars, is priced at \$10 list.

Formed of pressed steel stampings throughout and weighing 7 lbs., the Van Auken seat attachment can be installed on a car in less than 30 minutes. The entire seat is held rigidly in same position as the regular seat and the hinges which allow the entire seat to fold forward coincide with the position of the hinges used with the regular seat.

The movable element consists of two frames, the lower one providing the track rails for the rollers with the upper frame attached directly to the original seat cushion frame. The hinges are secured to the lower frame. A

heavy coil spring keeps the seat extended to the maximum position forward while a slight pressure backward on the part of the passenger pushes the entire seat to the rear against the spring.

Notches in the upper frame runners provide for variations in seat travel up to eight inches. Operation of the seat for different settings is by pulling out and releasing a knob placed on the lower frame. A positive fold back catch keeps the seat in the desired position and it is claimed by the manufacturers that by leaving the seat free, the spring tends to absorb road shocks and make for easier riding.

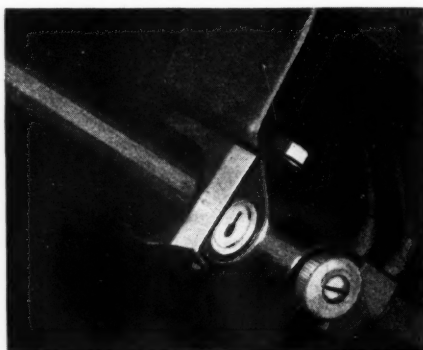
The Finer Chrysler "70" Offers New Body Styles and Lower Prices

(Continued from page 21)

curtains formed of Pyralin and setting into special fixtures on the doors may be opened with the doors either when the top is up or folded. In the latter position, the top sets flush with the top of the rear seat and is protected by a boot which covers the side bows as well. When it is necessary for the driver to extend his left arm to signal traffic with the curtains set in place, an auxiliary window provided with spring hinges makes this operation very easy. A special compartment behind the rear seat is provided for the carrying of the curtains when not in use.

New Color Scheme

Panel inserts of contrasting colors to the general color scheme are embodied in the moulding for the doors of the sport open models. The unison seats which have featured the previous sport models are retained in the roadster, the latter having also an unusually complete range of equipment, including nickel-plated windshield stanchions, side windshields, and an extra folding windshield and shroud which set into the rumble seat compartment. A small door permitting access to the golf club



A coincidental lock securing both ignition and steering gear is regular equipment on new Chrysler "70"

compartment is provided on the right side of the body. The tonneau windshield and shroud are offered at a slight extra cost as are the attachments for carrying a trunk at the rear of the body. On certain closed cars the service department can supply welled front fenders for the carrying of spare tire so that a trunk may be mounted at the rear of the bodies.

By setting the seat cushion frames directly on the floor boards, it was possible to lower the closed car roofs 1 in. at the rear and 1½ in. at the front. This arrangement provides also for

greater leg room in the interiors. Genuine walnut garnishings are used through the closed models, while the upholstery is in a velvet mohair. Both the gearshift and brake levers on all cars are fully nicked and the front floorboards are sealed by felt strips to exclude the entrance of cold air in winter and hot air in summer.

Coincidental Lock Used

A Hershey coincidental lock securing both the steering and ignition systems is mounted on the steering column near the instrument board. The latter has been redesigned and the layout of the oval instrument changed to accommodate a clock which is included as standard equipment.

All models are equipped with a stop light, rear view mirror, automatic windshield cleaner, dash gasoline gage, dash heat indicator, clock and the usual array of other instruments. On the closed models rear curtains and dome lights are standard and all models except the Royal coupe are provided with heaters. Smoking sets are included on the Brougham and Crown sedans. Front and rear bumpers are standard on the roadster as are the windshield wings. The rigid curtains are standard on both sport open cars. With the adoption of the new wheel size there has been a change in the spare tire carrier.

NEW APPLIANCES FOR SHOPS

Meas-ur-check

A machine for accurately recording the amount of gasoline pumped into the customer's gasoline tank is being manufactured by the Gasoline Register Co., 4619 Ravenswood Ave., Chicago, Ill. This device, known as the Meas-ur-check, not only records the amount sold on an internal roll, but also delivers a receipt to the customer. The device is attached to any gasoline pump of the piston type and is operated by the same motion which actuates the pump. When the tank has been filled or the proper amount of gasoline has been put in, a small handle is turned which punches and delivers the receipt or ticket showing in gallons and quarts exactly how much gasoline has passed into the customer's gasoline tank. The device records from $\frac{1}{2}$ to 20 gallons. When the 20 gallon point is reached the handle of the pump cannot be turned any farther until the ticket is cranked out of the machine.

The device has the advantage of assuring the customer that he is getting what he is paying for. It thus builds up confidence and increases trade. It also prevents dishonesty on the part of employees at the gasoline station and makes it possible to check the gasoline inventory with cash receipts with unusual precision.

New Larkin Compressors

Greasing equipment in which the makers promise the highest efficiency, cleanliness and speed is being furnished by the Larkin Automotive Parts Company, of Dayton, Ohio, in the Larkin-Thuro "LA-20" compressor. This is a new Larkin product. The compressor

has a capacity of 15 lbs. of lubricant which it delivers to the bearings under 3500 lbs. pressure, forcing out the old grease and supplying fresh lubricant. It is mounted on a metal base which is provided with a step on which one foot can be placed to facilitate application of pressure. The compressor is on easy-rolling castors. It is said to be speedy in operation and easily filled.

Larkin offers another new compressor in its "A-25" type which is of $1\frac{1}{4}$ lbs. capacity and although but slightly larger than the ordinary hand compressor will force lubricant into a bearing at a pressure of 7500 lbs. per square inch. Easily carried, speedy and efficient in operation are merits claimed for this machine. It is equipped with a Larkin-Thuro swivel joint steel hose which permits free action in any direction. The makers recommend this equipment particularly for the use of fleet owners where frequent and fast lubrication are demanded.

Elite No. 50 Jack

Hydraulically operated, the No. 50 jack produced by the Elite Mfg. Co., Ashland, O., has a lifting range of 11 in., the low being $4\frac{1}{2}$ in. and the high $15\frac{1}{2}$ in. The handle is worked like a pump and 1 in. of movement is said to be sufficient to raise the heaviest loads. There are no levers, ratchets, dogs, chains or toggles, it is stated, and one release valve operates the lowering mechanism so that the load may be lowered at once or by degrees.

New Black & Decker Drill

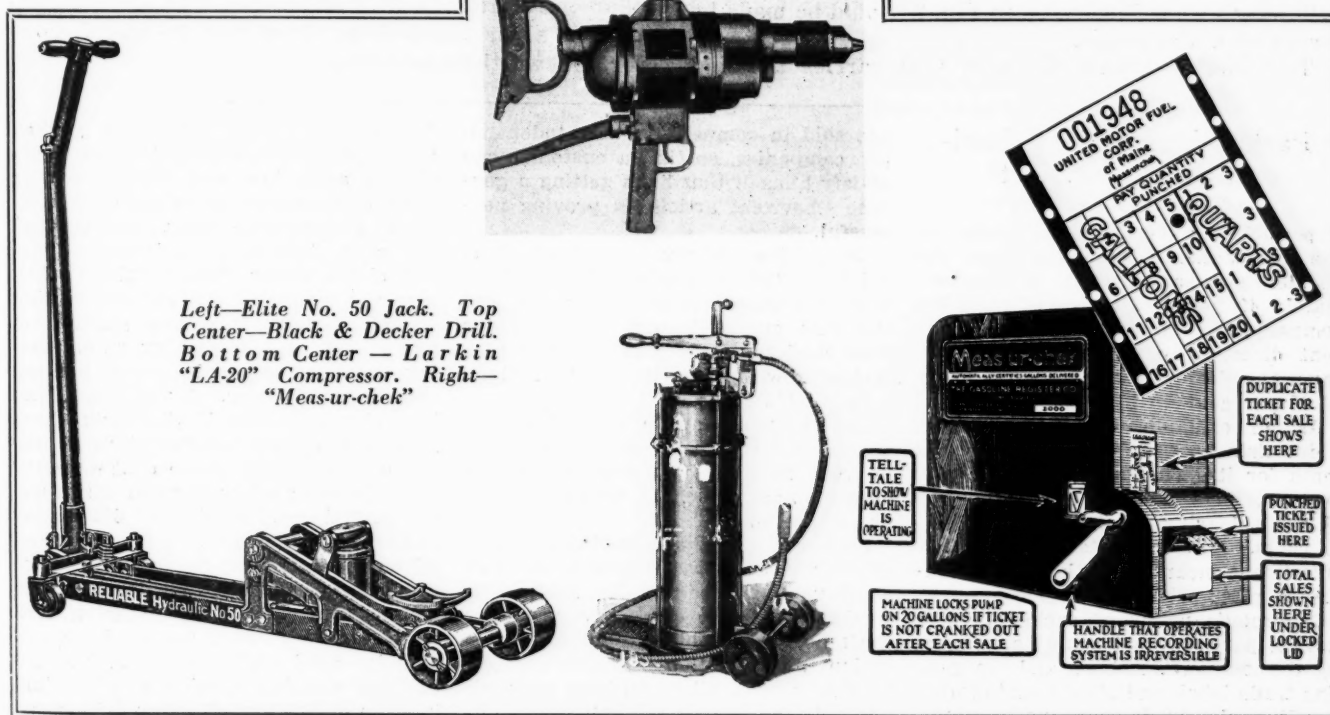
Designed for popular usage and a wide range of service a $\frac{5}{8}$ inch Special Ball Bearing Portable Electric Drill has been brought out by the Black & Decker Manufacturing Company, Towson, Md. It is predicted by the company that this unit will eventually become the most widely used drill of the Black & Decker line.

While powerful, the new drill is light in weight and so designed that it can use satisfactorily either carbon steel or high speed steel bits for drilling holes up to $\frac{5}{8}$ inch in steel or as large as 2 inches in wood. For use with spring expanded cylinder hones the drill is said to be highly efficient. The drill has the "pistol grip and trigger switch," which feature has been improved by use of a two pole switch. The overall length of the drill has been reduced to a minimum for work in close places. A special chuck key holder is integral with the breast plate, so the key will always be with the drill. The drill comes complete with combination spade handle and breast plate, three-jaw geared nut chuck for straight shank drills up to $\frac{5}{8}$ inch, 15 feet duplex electric cable, attachment plug and detachable side handle. The capacity of the drill in steel ranges from $\frac{1}{8}$ inch to $\frac{5}{8}$ inch. It has a no-load speed of 400 r.p.m. and weighs $17\frac{1}{2}$ lbs. Price for 110 volts \$68.

High Fall Production Is Expected

Thompson Products, Inc., reports a production of 1,700,000 pieces during August the greatest production for that month in the history of the Cleveland plant. This does not include the Detroit plant.

Left—Elite No. 50 Jack. Top Center—Black & Decker Drill. Bottom Center—Larkin "LA-20" Compressor. Right—"Meas-ur-check"



Putting Precision and Speed in Transmission and Clutch Service

(Continued from page 17)

stressed and alignment is just as important in the Ford transmission. In this case the rear engine bearing constitutes the front bearing of the clutch and transmission assembly and the babbitted ball cap carried at the rear of the crankcase is the rear transmission bearing.

It is, therefore, very important when performing Ford transmission service, to see that the crankcase is in perfect alignment. Most Ford service stations are equipped with a surface plate for this purpose. If a surface plate is not available a straight edge should be used to see that the rear of the crankcase has not sagged. Also a line drawn straight through the center of the crankcase should pass through the center of the opening that takes the ball cap.

It will be seen that with a line drawn through the center of the front of the crankcase and extended out through the center at the back of the crankcase that the dimensions "A" should be identical. It frequently happens in turning around on narrow streets that a Ford is backed violently into the curb. The strain from this impact is transmitted directly to the rear of the crankcase with the result that many a case is sprung more than $\frac{1}{2}$ in., when in reality this case should be true within $\frac{1}{64}$ in. Such misalignment quickly destroys the best overhauling job.

Assembling

In assembling the clutch and transmission, care should be exercised to see that no grit or foreign matter gets in. Where the bearings used are of the adjustable type they should be so set that there is no perceptible end play but at the same time there should be no binding. On work where the transmission case and the clutch housing are separate castings, but bolted together, great care should be used to see that the machined surfaces are clean and free from all irregularity that would throw the two units out of line.

In reality the clutch and transmission shaft are extensions of the crankshaft and should be in perfect alignment with it. In order to accomplish this the following test as illustrated in Fig. 2 should be made by means of a dial gauge.

Test No. 1—Clamp the arm that carries the dial

gage onto the flywheel housing and set the contact point of the dial gage up against the portion of the flywheel that is bored to receive the clutch shaft front bearing. This should run true within .0025 in. The dial reading for this would be .005 in.

Test No. 2 consists of moving the dial indicator so that it is in contact with the face of the counter-bored portion of the flywheel, the reading should be true within .0025 in. which will show a dial reading of .005 in.

Test No. 3 requires placing the mounting for the dial gage under one of the nuts that holds the flywheel to the crankshaft and bringing the gage in contact with the rear surface of the flywheel housing which should vary not to exceed .003 in., or a dial indicator reading of .006 in. Shifting the dial indicator so that it is in contact with the inner bore of the flywheel housing the reading should not exceed .010 in., which would indicate that the bore was not more than .005 in. out of round. Any misalignment in excess of those just given will result in excessive wear of the clutch and transmission.

Before reassembling the clutch and transmission in the chassis, the mounting flanges should be scraped to be sure that there is no dirt on them and that they are not burred. Any foreign matter here or any damage to the surfaces would be likely to throw the clutch and transmission slightly out of line with the result already referred to.

Winter Enclosures Help Sell Used Cars

(Continued from page 12)

be necessary to consider the responsibility of the car owner, and whether the car is paid for or is just being purchased. If the car is paid for, the sale can be made, taking a chattel mortgage, or it may be that it would be safe to take the notes of the purchaser, while in other cases credit might be extended for 30, 60 or 90 days on open account.

In the matter of installing enclosures on cars that have not yet been sold, some judgment must be employed for it would be obviously foolish to put a sixty dollar enclosure on a fifty dollar car. The same investment on a car worth from three-fifty up would, however, be worth considering.

Parts Discount Plan Instituted by Chevrolet

(Continued from page 19)

it possible for the dealer to realize on the transaction. Assuming that the dealer gets a discount of approximately 40 per cent on parts from the company, and in turn allows a 25 per cent discount to the independent garage, the dealer makes a gross profit of 25 per cent on his investment.

As an example, consider an item which lists for \$1. The dealer pays 60 cents for it. The independent garage, in turn, buys it from the dealer for 75 cents, leaving the latter a profit of 15 cents. Fifteen cents on a 60 cent investment means that the dealer realizes a gross profit of 25 per cent.

Chevrolet's policy of packaging fast moving parts in neat containers, bearing the company's emblem and the genuine trade label, and also stamping with the Chevrolet trade mark parts which

are sold in competition with independent companies, so that a customer can satisfy himself that he is getting a genuine Chevrolet article, is proving successful.

During the first quarter of 1926, Chevrolet started packaging and marking several popular replacement parts, and the plan met with such instant favor from dealers all over the country that it has now been extended to include a list of 114 parts.

Putting parts up in attractive containers makes it easy for the dealer to arrange attractive window and showcase displays which in turn invite the eye of the public.

Such parts as the following are now offered in attractive containers: hub bearing felt, rear axle shaft felt washer, rear axle shaft key, propeller shaft housing bushing, differential side pinion, differential end thrust washer, bearing spacer, oil pump idler gear, oil pump drive gear, tie rod bolt, king bolt,

felt washer, water inlet pipe gasket, bevel ring screw, high and intermediate sliding gear, low and reverse sliding gear, countershaft drive gear, countershaft intermediate gear, countershaft low gear, differential and thrust bearing, clutch collar, valves, valve spring, water outlet gasket, exhaust fitting gasket, carburetor intake gasket, oil pan gasket, oil pan packing, main bearings both uppers and lowers, bearing shims, valve lifter, driven gear, fan belt, clutch leather, P. S. housing base gasket, king bolt, piston rings, water pump shaft, water pump gasket, water pump packing, oil pump cover, oil gauge, differential spider pinion, distributor and cover, switch key, oil pump gasket, oil pump drive gear, tie rod bolt, brake lining, felt washer, reflector, pistons, pistons and pins, wheel bearing felt, clutch friction ring, manifold gasket, cylinder head gasket, steering knuckle bushing, steering knuckle arm bushing, ignition switch and oil pump drive gear.

EDITORIAL

Accessories to Sell

—The Windshield Wiper—

THE windshield wiper is more than an accessory. It is a safety device that is practically a necessity on every car—closed or open. A good windshield wiper cleans the glass in rain or snow and enables the driver to have a clear view at all times of what is ahead. No driver who has an accident because of being "blinded by rain or snow" can justify himself for his delinquency in not installing a good windshield wiper.

There are many kinds of windshield wipers on the market. Some are operated by hand, some by the suction of the engine and others by electric current from the battery. The automatic wipers are particularly valuable when driving in continuous rain or snow because without any effort on the part of the driver they keep the glass clean.

The windshield wiper should be a good one. It should be dependable and it should wipe clean. No car owner should be satisfied with a makeshift windshield wiper. It is an easy matter to take off a faulty one and install a good one. Progressive dealers every day are making money doing it and thereby adding to the safety and convenience of the car drivers.

To promote the sale of a good windshield wiper is a commendable service in the interest of public safety.

Something to Live Up To

A BIG automobile manufacturing company which is among the outstanding successes of this marvelous industry, gives the following definition of standardized quality:

"Standardized quality, as this company has defined it, bespeaks the use of materials which will withstand, beyond peradventure, the most wracking service to which they could possibly be subjected. It demands rigid adherence to the highest ideals of precision and exactitude in manufacture, constant vigilance in inspection, and tests that might well incapacitate any ordinary mechanism."

Ideals such as these combined with the most progressive engineering and a flexibility of manufacturing processes that will permit the improved product as it is developed to be put on the market with least delay are what we need in the new phase of the industry that is rapidly asserting itself.

The call today is insistent not only for automobiles of durability but for cars that give the finest performance with economy and satisfaction.

Attractive Maintenance Service

THERE is something attractive about the way H. L. Stratton, Inc., of New York, sells maintenance service. Every month a neatly printed card goes out to all car owners and customers listing a special group of operations that will be performed during the month for a special price named on the

card. In the month of October, for instance, an extensive lubrication, tightening and adjustment job will be performed for the price of \$12.95. This job includes complete tuning of the engine, adjustment of brakes, timing chain and steering wheel, and alignment of front wheels, in addition to a complete greasing and tightening. The price includes all materials as well as labor.

The experienced service man will recognize in this group of operations a good opportunity for profit. The special job is well defined and takes in services that the shop is equipped to perform speedily and well. And when the job is done its results are apparent in the better operation of the car.

There is no uncertainty here, no chance for an expensive come-back that might wipe out all profit and put the shop in the hole. In fact, this shop is promoting the service that is profitable and which prevents serious trouble that might lead to uncertain and unprofitable servicing necessities.

It is a wise dealer or garage man who deliberately sets about to sell the special services that he is prepared to perform at a profit and to the satisfaction of the car owner.

Better Racing

UNDER a new administration the Contest Board of the American Automobile Association is making a commendable effort to give the public better racing programs and to elevate this great sport in the esteem of the public. Automobile racing has suffered abuses in the past, and still does, but it is one of the most spectacular of modern sports, and it is one that has a great utilitarian advantage in promoting the development of better motor vehicles.

The aggressive policy adopted by the management of the Contest Board assures the public that the races held under the sanction of the A. A. A. will be honestly conducted and the records established may be accepted as reliable. With this assurance we may look forward to a renewed interest in automobile racing.

Ohio Dealers Tell the World

THAT was a splendid meeting that the Ohio automobile dealers held recently at Columbus. Their state organization, now affiliated with the National Automobile Dealers' Association as an integral part, is one of the strongest and most aggressive in the country. A good program was prepared and delivered, and best of all there was an attendance of about 250 dealers. When dealers get together like that some good must follow. For the automotive trade in Ohio the prospects are most encouraging. More and more dealers should flock to the standard of this strong organization and help to make business better for all.

OUTPUT IS LIKELY TO TAKE

Seasonal Dip of Vehicle Production Again Due

Year Holds Up Strong on Whole with Good Demand for Cars Continuing

DETROIT, Oct. 2.—Production in the automobile industry, for October, taken as a whole, will probably start tapering off slightly, following a seasonal tendency.

While it is expected that production for this month will probably be smaller than last month, on the other hand there is every indication that it will exceed October of a year ago by a good margin. This is perhaps best indicated by a recent survey of traffic managers of the various automobile companies which shows that car requirements for the last quarter of 1926 will exceed those of the corresponding period a year ago by a considerable margin.

Business conditions throughout the country continue good as a rule, with a result that the demand for automobiles continues strong.

Some of the automobile companies have been enjoying phenomenal successes this year and reports indicate that the demand for their products will continue strong into the late months of the year.

Two New Hupp Bodies

DETROIT, Oct. 4.—Two additional body styles have been added to the Hupmobile line. These are a close coupled five-passenger victoria on the eight cylinder chassis listing at \$2345 and a rumble seat roadster on the six cylinder chassis listing at \$1385.

The victoria model is of the two-door type and has an adjusting device for altering the height of both the front tilting seats. The rear seat is 52 inches wide and provided with deep arm rests. The upholstery is grey button tufted mohair. Exterior finish is light green with a black molding of the double belt effect.

On the new roadster the rumble seat may be opened by means of a spring catch from behind the parcel space in the front compartment. The windshield frame and stanchions are nickel plated. The exterior finish is two shades of brown.

Plan New Ford Plant

SAN FRANCISCO, Cal., Oct. 2.—An official statement regarding the plans of the Ford Motor Company for a new plant in the San Francisco Bay region was made by W. H. Goodwin, district manager for the Ford company. He said Ford eventually would have a new

modern plant on the bay, in which six days' production could be turned out in five days.

Continuing, Goodwin said:

"Our present facilities in San Francisco are not adequate for production of six days' output in five days' work. This means that we must have a new plant, where our own ships can unload and where work can be conducted on the scale set by Henry Ford."

Studebaker Adds "6" Victoria

SOUTH BEND, Ind., Oct. 7.—Addition to the Studebaker line of a Standard Six Custom Victoria for four passengers and priced at \$1335 is announced by the Studebaker Corp. of America. The exterior is finished in Kinick green and Tuchi gray lacquer with an ebony belt having apple green striping. Chase mohair upholstery with broadlace trim and Butler finished hardware are used in the interior.

Besides the luggage compartment in the rear deck there is a concealed locker behind the driver's seat for smaller parcels.

Standard equipment includes heat indicator on dash, two-beam headlights, coincidental lock, spare tire lock, disk wheels, front and rear bumpers, automatic windshield cleaner, rear vision mirror and traffic light.

Wilson Optimistic

MOLINE, Ill., Oct. 4.—Conditions in the automobile industry are more promising today than ever before, according to E. H. Wilson, president of the E. H. Wilson Manufacturing Company of Moline, who has returned from a business and vacation trip in the east. Conditions are especially bright for automobile body manufacturers, he declared.

The manufacturer's optimism and the cause for it are reflected in the fact that more than 600 men are today employed in the Wilson body factory and the plant is busier now than at any time since the war boom period. A large force is working as late as midnight and on Sundays also.

Many workmen have been added recently to the company's force. The company is turning out 14 different types of bodies.

Moon Signs F. A. Coon

ST. LOUIS, Mo., Sept. 27.—Appointment of F. A. Coon, 4705 Cass Avenue, Detroit, one of the most widely known automobile men in the city, as a distributor, is announced by the Moon Motor Car Company. Mr. Coon has been sales manager for the past eight years of the Walker-Saxs Company, one of the oldest and most active Ford dealers in Detroit. He is also known among automobile men in Detroit as having been the first to use the retail finance credit plan in Detroit.

Deliver New Pontiac Truck

PONTIAC, Oct. 4.—A six-cylinder delivery car embodying the Pontiac chassis is being shipped to several of the larger dealers this week by the Oakland Motor Car Company. General Motors entry into the light commercial field with a complete delivery car listing at \$770 marks the lowest priced car of its type on the market. The main feature of the new delivery car is the closed passenger car comfort for the driver. This compartment is provided with regular Pontiac two door sedan folding seats, sedan doors and window regulators, Fisher one-piece windshield with automatic cleaner and the usual array of instruments. The body is of 77 cubic feet capacity with the exterior steel covering finished in blue duco relieved with a broad belt of orange extended from the front compartment all the way around the body. With full load the floor of the body is 25 inches from the ground. The gas tank with gage is located at the rear of the body and the tires are special heavy duty 29x4.75 balloons. The chassis of the delivery car is the regular Pontiac chassis without change.

N. S. P. A. Space Allotments

DETROIT, Oct. 1.—The official allotment of space at the coming exhibition in Chicago, Nov. 15 to 19, was held at N. S. P. A. headquarters today. Robert Macfee, secretary to the show committee, stated after the drawing that the entire space consisting of 125 booths has been taken with the exception of ten booths.

A. M. F. A. E. Meets Nov. 6

WATERLOO, Ia., Oct. 4.—The Associated Manufacturers of Fabric Auto Equipment, Inc., will hold its annual meeting and election of officers at the LaSalle Hotel in Chicago on Nov. 6, according to an announcement made by Clyde Hinson, president of the association and head of the Hinson Mfg. Co. of this city.

Cadillac to Celebrate

DETROIT, Oct. 4.—To celebrate the entrance of the Cadillac Motor Car Co. upon its 25th year of production, distributors and dealers in 900 cities throughout the country will hold a silver anniversary salon in their respective showrooms Oct. 9 to 16.

There are 50 body types and styles and 500 color and upholstery combinations in the new line of Cadillac cars recently introduced. Because of the extensive line, many dealers, in addition to arranging for displays in their showrooms are also finding it necessary to engage exhibition halls and auditoriums to provide sufficient room and a proper setting for the showings.

A SLIGHT DROP THIS MONTH

Record Nash September

KENOSHA, Wis., Oct. 2.—September was the largest September in the history of the Nash Motors Company in point of sales and production, according to E. H. McCarty, Nash general sales manager. "September also would have won the honor of being the biggest single month of business Nash ever achieved if we had been able to produce all the cars that were on order," Mr. McCarty added. He said September business brought the total volume of Nash sales and production for the nine months of 1926 up to 111,965 cars as contrasted to 75,347 cars for the same period in 1925, which was the biggest previous Nash year.

Ruggles Holds Convention

SAGINAW, Mich., Oct. 4.—District sales managers of Ruggles Motor Truck Co. were addressed by Joseph W. Fordney, president, and Albert Sleeper, a director, at the annual sales convention. Mr. Fordney is a former congressman from this district and was for a long time a national political figure, and Mr. Sleeper is a former governor of Michigan. Sales during the first half of the year were shown to have increased 24 per cent over the first half of 1925 with promises of further increases in the latter half.

The company's new line of trucks which are soon to be publicly announced, were shown at the meeting and plans were made for a big sales campaign.

Victor Increases Stock

ST. LOUIS, Mo., Oct. 4.—Stockholders of Victor Motors, Inc., have voted to increase the capital stock of the company \$500,000 in 5 per cent preferred participating stock. Approximately \$300,000 had already been subscribed by the stockholders. It was also voted to increase the board of directors from seven to 15. The object of the increase in the capital stock, was to carry out expansion plans.

Enlarge for Nash Light "6"

KENOSHA, Wis., Oct. 2.—Material expansion of the production capacity of the Nash Light Six plant at Racine is under way. Announcement of this program, entailing the installation of more than \$600,000 worth of additional equipment and giving the plant a production capacity of 300 to 350 cars a day, is made by C. W. Nash, president of the Nash Motors Company. Heavy demand for the Nash Light Six has kept the Racine factory in an oversold condition for many weeks past, it is stated, although the present production at that plant is more than 225 cars a day.

Definite orders have been placed for practically all of the new machinery contemplated in the expansion pro-

gram. Some of the equipment has already been installed and, it is expected, that the entire installation will have been completed in the next 60 to 90 days. All departments in the large Racine plant will be affected.

Dealers Rent Trucks

NEW YORK, Oct. 2.—Reports that the Yellow Truck and Coach Mfg. Co. is offering a truck rental service were explained by officials of General Motors as "an individual dealer's experiment which Yellow Truck is watching with interest, but with which it is not connected in any way."

The plan, as worked out by the individual dealer, consists of offering trucks for rental at \$30 a week, plus 13 cents a mile, the total charge to include gas, oil, insurance and the salary of the chauffeur.

Phillips Aids Emerson

DETROIT, Oct. 4.—J. Hartley Phillips has been made assistant to P. L. Emerson, vice-president of the General Motors Truck Co., in charge of sales. Previous to his appointment, Mr. Phillips spent 18 years with the White Co.

Amorous Makes Change

MARYSVILLE, Mich., Oct. 4.—C. B. Amorous, president of the Wills Sainte Claire Company of New York, has resigned to accept an executive position with another automobile company, according to an announcement made by C. Harold Wills, president of Wills Sainte Claire, Inc., of Marysville, Mich. C. M. Baldwin, who for the past eight months has been assistant to Mr. Amorous, will assume full charge of the New York Company.

Off for Europe

SOUTH BEND, Ind., Oct. 4.—Paul G. Hoffman, vice-president in charge of sales, Howard S. Welch, export sales manager for the Studebaker Corporation of America, and Ralph De Palma, racing driver attached to the engineering staff, have sailed for Paris, where they will see the automobile show and inspect Studebaker interests in England and on the Continent.

Lavish Exhibit Plans

DETROIT, Oct. 2.—The General Motors exhibit of its entire line of products, which will be held in the General Motors Building, Oct. 9 to 16, will be amid lavish surroundings. Elaborate plans are being made for the decorations. Besides the exhibit in the General Motors Building, dealers within a radius of 50 miles of Detroit will also hold special displays in their respective showrooms.

G. M. Closed Car Ratio Continues to Increase

Open Models Proportion of Total Output Only 16 Per Cent in July

DETROIT, Oct. 4.—Popularity of the closed car is still increasing in favor if the entire field may be judged by figures just released by General Motors Corp.

During July only 16 per cent of the total production of the corporation was open cars, compared with 46 per cent during July a year ago. The open car ratio was highest, this year, during the months of March and April, the former being 22 per cent and the latter 24 per cent. The average of 1926 to date is below 20 per cent compared with 37 per cent in 1925 and 57 per cent in 1924. Open car percentages by months for the past four years follow:

	1926	1925	1924	1923	1922
Jan.	16	53	58	66	71
Feb.	18	46	62	65	71
Mar.	22	40	62	64	75
Apr.	24	39	58	60	78
May	21	41	59	62	81
June	19	42	63	65	74
July	16	46	63	69	74
Aug.		38	60	70	69
Sept.		34	58	65	63
Oct.		30	48	62	76
Nov.		27	29	58	70
Dec.		23	33	56	61
Pct. for year		37	57	63	72

The comparison includes Chevrolet, Pontiac, Oldsmobile, Oakland, Buick and Cadillac.

Canadian Ford Dividend

DETROIT, Oct. 4.—A 10 per cent dividend payable on stock of record as of Oct. 1, has been declared by the Ford Motor Company of Canada, Ltd., according to Wallace R. Campbell, vice-president and treasurer.

G. A. Kissel Makes Tour

HARTFORD, Wis., Oct. 4.—G. A. Kissel, president of the Kissel Motor Car Co., has returned from a trip east where he visited Kissel distributors.

Continental Dividend

DETROIT, Oct. 4.—Directors of the Continental Motors Corp. declared the quarterly dividend at the rate of 80 cents per share per annum. Dividend is payable October 30 to stock of record, Oct. 15.

Moon Earnings Shown

ST. LOUIS, Oct. 2.—Moon Motor Car Co. earnings for the first six months of the year are reported as \$322,201, equal to \$1.84 a share, which compares with \$671,689 or \$3.73 a share in the same period of 1925.

Many New Names Are Added to A.E.A. Roster

Board Withdraws Objection to Participation of Members in N.S.P.A. Show

CHICAGO, Oct. 1.—Ten jobbers and fourteen manufacturers were elected to membership in the Automotive Equipment Association at the directors meeting here this week.

The board of directors also voted to waive jurisdiction over the show of the National Standard Parts Association, thereby withdrawing all objections to members of the A. E. A. exhibiting at the parts show. A number of A. E. A. members, who were also members of the N. S. P. A., and who exhibited at the parts show last year, had been threatened with discipline by the A. E. A. because the parts show was not sanctioned by the association. The action of the directors, however, leaves A. E. A. members, who are also members of the N. S. P. A., free to exhibit at both the A. E. A. and the N. S. P. A. shows.

The allotment of space for the A. E. A. Show made at the Congress Hotel on Wednesday reveals that the show this year is to be larger than ever. For the first time in the history of the A. E. A. Show practically all of the balcony space will be required to take care of the exhibitors. Space was allotted to 230.

Following is the list of new members:

JOBBERs

Ashton-Dever, Inc., 159 Massachusetts Ave., Boston, Mass.
Auto Supply Co., Inc., 137 South 3rd St., Grand Forks, N. D.
Fleer-Petty Auto Access. Co., 3221 Locust St., St. Louis, Mo.
Haynes-Patrick Auto Sup. Co., 201 East Second St., Tulsa, Okla.
Michigan Auto Supply Co., 134 E. Jefferson Ave., Detroit, Mich.
Motor Supply Co., Inc., 126 N. Third St., Monroe, La.
Norwood Tire Co., Inc., 624-30 Broadway, Long Branch, N. J.
The Charles B. Scott Co., 119 Franklin Ave., Scranton, Pa.
G. J. Seedman Auto. & Radio Company, Inc., Bedford Ave. at Madison St., Brooklyn, N. Y.
B. H. Spinney Co., 62 Hampden St., Springfield, Mass.

MANUFACTURERS

Atlas Brass Foundry Co., 1000 Park St. S., Columbus, Ohio.
Detroit Metal Spec. Corp., 1651 Beard Ave., Detroit, Mich.
The Electric Machine Co., 529 N. Capitol Ave., Indianapolis, Ind.
Federal Pressed Steel Co., 360 N. Michigan Ave., Chicago, Ill.
J. G. Haartz Co., 30 Lenox St., New Haven, Conn.
Hinckley-Myers Co., 701 Water St., Jackson, Mich.
Milwaukee Circulating Pump & Mfg. Co., 331 9th St., Milwaukee, Wis.
Owen-Dyneto Corp., 1920 Park St., Syracuse, N. Y.
Permatex Co., Inc., 1702-20 Ave. Y, Sheepshead Bay, N. Y.
A. Schrader's Son, Inc., 334 King St. E., Toronto, Ont., Canada.
The Scranton Glass Instrument Co., Inc., 939 Capouse Ave., Scranton, Pa.

The Woods Engineering Co., 108 E. Patterson St., Alliance, Ohio.
The Anderson Company, 957 Garfield, Gary, Ind.

Improve Roads Abroad

WASHINGTON, Oct. 2.—A 5-year program of road repair, which has been started in Central Europe, will give that region a light but modern highway transportation system, including thousands of miles of automobile roads which will make accessible to motorists many places difficult of access because of present conditions, according to a cable to the Department of Commerce from Pyke Johnson, secretary of the Highway Committee of the National Automobile Chamber of Commerce.

Engineers Visit Timken

CLEVELAND, Oct. 4.—Cleveland members of the Society of Automotive Engineers held their annual outing by driving to the Timken plant at Canton and later participated in a golf match on the Congress Lake course.

New Buick Foundry

FLINT, Sept. 25.—Ground has been broken for a new grey iron foundry for the Buick Motor Co. which will cost \$5,000,000. The new unit will add approximately 1,700 workers to Buick's payroll, according to Harry H. Bassett, president and general manager.

Again Producing Trucks

MILWAUKEE, Oct. 4.—The corporate title of the Parker Motor Truck Service Co., 606 Linus Street, Milwaukee, has been changed to Parker Motor Truck Co., Inc. The business was recently acquired by J. Grossmann and associates to resume the quantity manufacture of the Parker truck.

Distribute Peerless

BIRMINGHAM, Ala., Oct. 4.—The Mitchell-McDonald Motor Co. of Birmingham has secured the Peerless agency in Birmingham. The firm is composed of O. O. Mitchell and John McDonald, and the territory embraced includes most of the state of Alabama as well as the Birmingham territory.

1926 Will Go Down as Best Year, Says Horning

Sees Record Proportion of Industries in Favorable Profit Positions

BUCHANAN, Mich., Sept. 28.—The year 1926 will prove to be the greatest in the history of the industry, in the opinion of H. L. Horning, president of the Motor & Accessory Manufacturers Association and head of the Waukesha Motor Co. In summarizing the observations of the board members, he continued:

"The parts makers have experienced their best business and profits have been fairly satisfactory. The country is at its highest state of prosperity and while lowering of commodity prices, strengthening of money rates, slight curtailment of installment selling and lower prices on farm products and other slight indications of local problems are apparent, there never was a time when so large a percentage of industries and commercial activities were in so favorable a situation in regard to volume and profit. While there is some tendency toward growth of inventories in all lines it is by no means out of proportion to the volume of business carried."

The truck industry is being put on a much sounder financial basis through elimination by several large manufacturers of excessive allowances for old trucks. Introduction of trucks in the national shows will give the parts builder a better opportunity to reach his market, said Mr. Horning.

To Sell Cadillac

PORTLAND, Ore., Oct. 2.—The Roy K. Purkey Motor Company, of Aberdeen, Wash., has been appointed Cadillac dealer in the Grays Harbor country, according to an announcement made by Nagelvoort-Stearns-Cadillac company.

New Models and Price Changes in MOTOR AGE Prices and Weights Tables

Make	Model	Body Style	Old Price	New Price
Hupmobile	E	Brougham	New Model	\$2245
Peerless	6-90	Sport Roadster	New Model
Peerless	6-90	Coupe Roadster	New Model
Peerless	6-90	Sedan	New Model	1895
Peerless	6-90	Sedan	New Model	1895
Peerless	6-90	Landaulet	New Model	1995
Pierce Arrow	36	Runabout	\$5250	5875
Pierce Arrow	36	Touring	5250	5875
Pierce Arrow	36	Touring	5250	5875
Pierce Arrow	36	Coupe	6800	6375
Pierce Arrow	36	Sedan	6900	6375
Pierce Arrow	36	Sedan	7000	5875
Pierce Arrow	36	Coupe Sedan	6900	6375
Pierce Arrow	36	Enclosed Limousine	7000	5875
Pierce Arrow	36	French Limousine	7000	7500
Pierce Arrow	36	Landaulet	7000	6000
Pierce Arrow	36	Sedan Landau	New Model	6000
Pierce Arrow	36	Vest. Sedan	New Model	6375
Pierce Arrow	36	Sedan Landau	New Model	6600
Pierce Arrow	36	Enclosed Ladau	New Model	6600
Pierce Arrow	36	French Landau	New Model	8000
Willys Knight	66	Couper	New Model	2295

Branch Managers and Officials Who Attended North East Electric Convention



This is a photograph of officials and branch managers of the North East Electric Co., who attended the company's sixth annual Sales and Service convention in Rochester recently. Reading from left to right they are: 1—G. A. Johnson, mgr. New York branch; 2—F. R. Campbell, mgr. San Francisco branch; 3—Ronald Clark, mgr. Paris branch; 4—R. J. Kelleher, gen. mgr. North East Service Inc.; 5—Warren K. Lee, sales mgr. North East Service Inc.; 6—C. W. Coapman, secretary-treasurer North East Service Inc.; 7—J. W. Spears, mgr. Atlanta branch; 8—W. C. Edwards, mgr. Detroit branch; 9—Geo. Goldman, mgr. Kansas City branch; 10—W. G. Lyons; 11—D. P. Cartwright, service mgr. North East Service, Inc.; 12—L. P. Michaud, mgr. Chicago branch; 13—R. L. Trube, mgr. London branch; 14—F. C. Russell, mgr. Rochester branch; 15—J. W. Neun, mgr. Toronto branch.

Ford Forces Dined

SAN ANTONIO, Tex., Oct. 4.—The third in the series of dinners tendered by the San Antonio Ford dealers to their salesmen was held recently, proving to be a peppy affair.

Frank Gillespie of Herpel-Gillespie, San Antonio Ford dealers, acted as toastmaster, and G. W. Tips, advertising manager of the Houston branch of the Ford Motor Company, praised the San Antonio Ford salesmen for their fine sales campaign.

The sales campaign, for which the slogan is "Buy a Ford and Spend the Difference," has attracted a deal of attention in the city, being featured on billboards, in newspaper display advertising, while some enterprising Ford dealers have driven their messages home by displaying attractive bedroom suites and other household equipment in their windows, cards being used to point out what can be done with the "difference" saved on buying a Ford.

Link-Belt Opens Branch

CHICAGO, Oct. 4.—Link-Belt Co. has opened a new branch office in Utica, N. Y., which will be in charge of F. P. Hermann, Jr. This is the 34th office, and the third within the State of New York which the company is now operating for the sale and servicing of its products.

Tells of Factory Program

LOS ANGELES, Oct. 4.—Charles W. Matheson, vice-president and director of sales of the Oakland Motor Car Company, recently gave Southern California Oakland and Pontiac dealers a first-hand picture of the expansion program now being enacted in Pontiac, at a

meeting held under the auspices of Reeve Gartzmann, Inc., distributors.

Mr. Matheson personally visited most of the important dealer points in Southern California during his stay in order to get first-hand the dealer viewpoint.

Discuss Chrysler "50"

ALTOONA, Pa., Oct. 4.—Chrysler dealers from 15 Central Pennsylvania counties, all served by the local distributors, Penn Motors, Inc., were entertained at a luncheon at the Colonial Hotel. More than 100 hundred were present. The new Chrysler "50" was the center of discussion.

Many to Make Displays

NEW YORK, Oct. 4.—More than 100 makers of parts, accessories and service equipment have announced their intention of exhibiting at the National Automobile Shows at New York and Chicago, the Motor & Accessory Manufacturers Association has announced. It is likely that the exhibitors, outside car and truck and taxicab sections, will total between 200 and 300, it was predicted.

Controls Grinder Company

MILWAUKEE, Oct. 2.—Charles J. Davidson, formerly chief engineer of power plants for the Milwaukee Electric Railway & Light Co., and more recently a consulting engineer in private practice, has acquired the controlling interest in the Gilbert Grinder Co., Milwaukee, manufacturing tool grinders in various sizes and general abrasive machines. He has taken charge of the business, being president and general manager.

Cord and Associates To Control Duesenberg

President of Old Company and Brother Will Remain in Organization

AUBURN, Ind., Oct. 4.—Following negotiations which have been under way for nearly a year it became known today that arrangements have been completed by which E. L. Cord, president of Auburn Automobile Company, Auburn, Ind., and associates are to take over the operation and control of the present Duesenberg company, of Indianapolis. Fred S. Duesenberg, president of the Duesenberg Automobile Company and one of the best known figures in the automotive industry, will continue with the Duesenberg organization in high executive capacity as will his brother, August S. Duesenberg.

Thus, without eliminating the Duesenberg genius, but rather capitalizing it, the new control is preparing to build up an extensive merchandising program for the Duesenberg car, emphasizing its mechanical and structural excellence in an appeal to the fine car field and stressing stock qualities adapted from extensive tests on automobile race courses. While many of the stock features of the Duesenberg car have come as race course developments the story of its stamina and high qualities have not been emphasized in the promotion of the merchandising end of the Duesenberg business.

The new company plans very aggressive advertising and merchandising campaigns for the sale of an extremely high speed, high quality Duesenberg car.

The Duesenberg plant is located at 151 West Washington Street, Indianapolis, and comprises 16 acres bordered on three sides by railroads.

The tooling program contemplates immediate extension and expansion and subsequent enlarged production as the sales organization is developed. Duesenberg builds its own engines, transmissions, axles and clutches, incorporating the best metals available for the component parts. While the production schedule has been relatively small it is felt that Mr. Cord and his associates, with merchandising efforts conducted along proper and aggressive lines, will open a wide market for their product.

Schwab Heads Society

NEW YORK, Oct. 4.—Charles M. Schwab has been elected president of the American Society of Mechanical Engineers. He will assume his new office at the annual meeting of the society in New York early in December. He will succeed William L. Abbott of Chicago.

Interest Runs High at Merchandising Meetings

About 2000 Tradesmen Have Attended New England Gatherings to Date

CHICAGO, Oct. 4.—Attendance thus far at A. E. A. merchandising meetings in New England has reached a total of about 2,000, according to an announcement today by the association's merchandising director Arthur R. Mogge. This figure included the meeting at Worcester, Mass., Sept. 27, at which the attendance was 400. Before the New England series closes meetings at Springfield, Mass., Providence, New Haven and Hartford will have to be included in the grand total for the campaign in that region.

Henry Kirkland has been the association's special merchandising representative at all of the New England meetings. One of the interesting side features was a special meeting of Cadillac dealers organized by the Cadillac distributors at Boston. This, also addressed by Mr. Kirkland, attracted 167 Cadillac representatives from all parts of the New England states.

Manchester, N. H., dealers liked the A. E. A. meeting held for state dealers in Manchester, Sept. 15, so well they asked for a special meeting for Manchester dealers which was held Sept. 28 when Mr. Kirkland addressed 107 Manchester tradesmen.

A merchandising meeting in Auburn, Me., Sept. 22, was attended by 300, and 250 more attended a meeting in Dunstan, Me., Sept. 20.

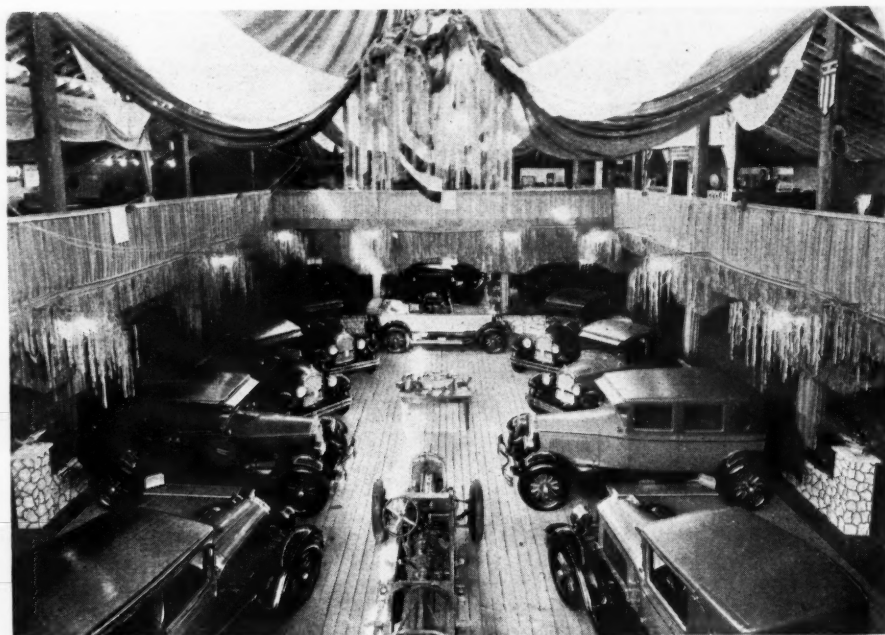
Final arrangements have been made for an A. E. A. merchandising meeting to be held in the Chamber of Commerce Hall in Newark, New Jersey, at 8:00 P. M., Oct. 25. C. E. Fischer, local Cadillac dealer will act as chairman at the meeting. The speakers will be John J. Hall of the A. E. A., S. J. Stern, of Automotive Merchandising, New York, and Ralph Rogdon, a service expert from New York. Leon Miller of the Economy Auto Supply Co. is chairman of publicity and invitations and is being assisted by E. Nicholas of the Elin Auto Supply Co. and J. Knox of Pruden Hardware Co.

Splendid support and co-operation is being given by Geo. Holgate, secretary of the Newark Automobile trade Association, and plans are being made for a record attendance.

Campaign in Northwest

TACOMA, Wash., Oct. 4.—M. D. Graham, special merchandising representative of the Automotive Equipment Association, was the chief speaker at a meeting attended by about 300 automotive merchants recently on the roof garden of the Winthrop Hotel in Tacoma. The meeting was held in connection with A. E. A. merchandising campaign

Many Farmers Were Among Automobile Buyers Who Attended Show at Interstate Fair



A glimpse of the automobile show held during the 42nd annual Interstate Fair at Spokane, Wash. In addition to the exhibits in Auto Hall cars were shown in tents surrounding the hall. Dealers report heavy sales at this show, many farmers being numbered among the buyers

and Mr. Graham delivered the A. E. A. message. Another successful A. E. A. merchandising meeting was held in Seattle, another at Spokane and one was held at Vancouver, B. C. Mr. Graham appeared at each of these gatherings, all being well attended.

This was Mr. Graham's first trip to the Northwest in the A. E. A. campaign for better merchandising methods and he expressed himself well pleased with the interest shown.

Sales Hit \$205,621

CLEVELAND, Oct. 4.—During a sales contest by the Bashaw Oakland Motor Co., Oakland and Pontiac distributor, \$205,621 worth of cars were sold. A team headed by J. E. McCulloch won.

Car Theft Loss Last Year \$35,000,000

WASHINGTON, Oct. 4.—Nearly 250,000 automobiles, valued at \$218,000,000, were stolen in the United States during 1925, the research division of the American Automobile Association discloses after an exhaustive survey.

The figures assume a recovery of 80 per cent of the cars, leaving a dead loss to motorists of \$35,000,000 for vehicles, plus the loss incurred in the repair of recovered vehicles and the time spent in establishing ownership after recovery.

Business Conditions

Department of Commerce Gives View of Current Situation

Measured by the volume of check payments, business during the four weeks of September was substantially ahead of the preceding year, according to the weekly statement of the Department of Commerce. Distribution of goods continued to register new high marks, as seen from figures on carloadings. New building contracts were larger than last year. The production of bituminous coal and bee-hive coke also registered advances over the preceding year. Lumber output, however, was smaller.

Receipts of cotton into sight were smaller than last year, while cattle receipts were larger. Receipts of wool at Boston showed substantial declines from a year ago, but hog receipts were on about the same level. Exports of wheat and wheat flour were substantially larger than in September a year ago, while corn exports showed little change.

Wholesale prices averaged higher than in the previous month, but were considerably below last year. Loans and discounts of Federal reserve member banks were higher than at the end of the previous month and a year ago. Interest rates, both on time and call loans, averaged higher than in either the preceding month or the same month of last year. Business failures were less numerous than in the previous month but showed little change from September, 1925.

Now You're Looking at Some Go-Getters Whose Actions Indicate They Have "Arrived"



A group of salesmen who attended Chevrolet "72 Car Club" Convention in Oakland, Cal.

OAKLAND, Cal., Oct. 4.—More than 100 of the leading Chevrolet salesmen of the Pacific coast gathered here recently for the first annual meeting of the "72-Car Club." Requisite for membership in this organization is the sale of 72 Chevrolet cars or trucks in the preceding 12 months.

The meeting lasted for two days, ending with a banquet in the St. Francis Hotel, San Francisco. Business meetings, sales talks, and a trip through the Chevrolet plant in Oakland were features. Fred N. Coates, Pacific coast regional sales-manager, personally conducted the meeting. W. J. Richmond, zone sales manager at Portland, Ore., and I. M. Dreyes, zone sales-manager at Los Angeles, assisted Mr. Coates in the job.

Good Show at Memphis

MEMPHIS, Tenn., Oct. 4.—Members of the Memphis Automobile Dealers Association are highly pleased with results obtained at the eighth annual automobile show which was held at the Tri-State Fair Grounds from Sept. 25 to Oct. 2, inclusive. The show was held as a feature of the annual Tri-State Fair and easily got its full share of the attention. Floor sales were satisfactory and dealers added many good leads to their lists of live prospects.

Decorations had been attractively and tastefully carried out and the selling forces at the show were well organized for work. Nearly all members of the Memphis Automobile Dealers Association were represented with exhibits.

Gleason Wins Laurel Races

WASHINGTON, Oct. 1.—James Gleason, of Philadelphia, driving a Miller special, won the 25-mile sprint and the 100-mile race in last week's events at the Laurel, Md., speedway, carrying off the prizes in the short event with an average speed of 125 miles an hour and in the longer race with an average of 113 miles an hour, which is slow for the Laurel track.

Fred Winnai, who came within a fifth of a second of breaking the Laurel record in the trial heats by spinning his car, the same Dusenberg 8 with which DePaolo won the feature event at Laurel last year at 135 miles an hour around the bowl, was leading in the 100-mile race and stood to win it. A flat tire

and a crash into the guard-rail, however, took him out of the race, making it easy for Gleason. Russell Snowberger was second in the race and Frank Farmer, crippled as the result of the Langhorne, Pa., races last year, was third when he took the post of relief driver for Jack Desmond. Ray Keech was the only other driver in the race.

Ten Join M. & A. M. A.

NEW YORK, Oct. 4.—M. L. Hemingway, general manager of the Motor & Accessory Manufacturers' Association, announces the election of ten new members, as follows: Bonney Forge & Tool Works, Allentown, Pa., wrenches; Brunner Mfg. Co., Utica, N. Y., air compressors and auxiliary appliances, car washers; Columbus McKinnon Chain Co., Columbus, Ohio, tire chains; Fitzgerald Mfg. Co., Torrington, Conn., gaskets; Hersey Mfg. Co., Chicago, Ill., automobile locks; K-D Mfg. Co., Lancaster, Pa., valve spring lifters, mirrors, etc.; Kilborn-Sauer Co., Fairfield, Conn., automobile locks; Marvel Products Co., Cleveland, Ohio, shock absorbers, gas gauges, shims; and Milwaukee Die Casting Co., Milwaukee, Wis., door handles, door and switch locks, switch handles.

To Sell Gardner

LOS ANGELES, Oct. 4.—Harold L. Arnold, Inc., Southern California Gardner distributors, announce the appointment of S. G. Cook, one of the best known automobile merchants in San Diego, as Gardner dealer for San Diego county.

Marmon Launches New Merchandising Program

District Sales Managers Hear Plans at Three-Day Conference

INDIANAPOLIS, Oct. 5.—Merchandising plans for the new Marmon Series "75" were discussed at a conference here called by H. H. Brooks, general director of Marmon sales, and attended by nine Marmon district sales managers. The conference lasted three days.

Under the new plan, as outlined at the conference, the United States will be divided into three zones under the management, respectively of S. A. Zweibel, Ottis Lucas and H. W. D. Brown. These zones, in turn, have been divided into nine districts under R. W. Greulich, Porter Smith, H. C. Edwards, J. K. Gregory, John Tainsh, Paul Morford, L. F. Johnson, John Boe and George F. Green. The foreign zone, under F. L. Hambly, will include a European district under W. L. Nicoll and a South American district under Pablo Homs. Additional foreign districts are expected to be organized within a short time.

The program for the meeting included talks by Mr. Brooks, W. T. Young, Jr., sales promotion manager, O. A. Hoffman, educational director, and other officials of the company. The district managers were conducted on a tour of the factory and were given a demonstration of new Series "75" cars. Satisfactory progress in the development of the "Little Marmon," to be placed in production this winter, was reported.

It was announced at the meeting that production of new Series "75" cars is progressing at the rate of 500 cars a month, with unfilled orders on hand which alone will insure operations at that rate until December 1.

Parts Business Increases

DETROIT, Oct. 2.—National Automotive Parts Association reports the average gross volume of business for its members and distributors in July and August as showing an increase of 13.69 per cent over the average monthly business in the first six months of the year. The first six months showed a gain of 25.58 over the last six months of 1925, according to C. H. Davis, executive secretary.

Iowa Convention Soon

DES MOINES, Oct. 4.—The annual meeting of the Iowa Automotive Merchants' Association will be held Oct. 28-29 here, with the merchandising experts of the Automotive Equipment Association co-operating in a comprehensive program. Divisional meetings and the banquet will be held on the first of the two days.

Specialty Jobber to Be A.A.A. Program Subject

Manager Levey Reports Show Space Contracts of 104 Exhibitors

CHICAGO, Oct. 4.—The specialty jobber will come in for extensive discussion at the convention of the Automotive Accessories Association at the Morrison Hotel on the evening of Nov. 10, according to William B. Levey, association secretary and manager of the show the association is to hold at the First Regiment Armory Nov. 8-13, inclusive. The specialty jobber's relation to the manufacturer and distributor, his importance generally and trade problems in which he figures will be brought into the forum. One of the leading speakers on this subject will be George Fritz, president of the Fritz Mfg. Co., of Cincinnati, Ohio, according to Mr. Levey, who promises a highly interesting program throughout. A letter received by Mr. Levey from Mayor William E. Dever, of Chicago, assures the association that Chicago's chief executive will be on hand to deliver the address of welcome unless unforeseen obstacles interfere.

One of the features of the convention will be distribution among jobbers of a standardized stock catalog which is nearing completion. S. M. Dover, president of the Doray Lamp Co., Chicago, as chairman of the association board will preside at the convention. There will be an election of eight regional governors who, in turn, will elect a chairman for the ensuing year and name committees.

Mr. Levey announces that 104 exhibitors already have taken space and come into the association. There are accommodations at the armory for about 140 spaces. Thursday, Nov. 11, will be known as "Chicago Day" at the show when the doors will be open to all persons handling automotive products at retail. Retailers outside of Chicago will be invited to attend on that day although it is expected the mass of attendance will be from Chicago and vicinity.

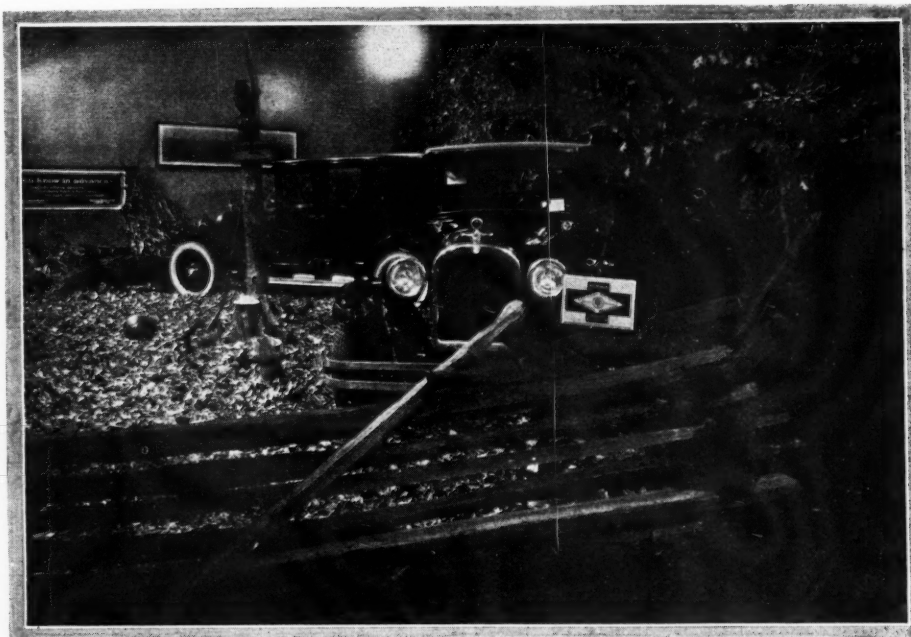
Exploit Whippet Economy

LOS ANGELES, Oct. 4.—The Willys-Overland Pacific Company, Los Angeles, in co-operation with its dealers in the Los Angeles metropolitan area, recently put on an unusual contest to exploit the economy of operation of the new Whippet which attracted a lot of prospects. A \$25 credit on any Overland or Willys Knight car was set up to the driver who went the farthest in one quart of fuel, driving a Whippet Sedan. The prizes were awarded daily.

Report on Traffic Survey

CHICAGO, Oct. 2.—Congestion in the Chicago loop is intensified by horse ve-

It Takes a Fast One to Get Past "Motor Age" Readers And Here Is One That Didn't



This is a window trim used by the Biery Motor Car Company of Alliance, Ohio, Dodge Brothers dealers.

Circulation of high quality necessarily is a circulation of closely discerning readers, and it has always been the boast of MOTOR AGE that such is the character of its circulation.

It was not at all surprising, therefore, that MOTOR AGE readers were heard from torrentially when an error of identification accompanied the above cut in the issue of Sept. 23. The descriptive matter used in connection with the cut said this was a window trim used by the Biery Motor Company, "Chevrolet distributors at Canton, Ohio."

The truth of the matter is that the Biery Motor Company represents Dodge Brothers as dealers in Alliance, Ohio, and the picture published was a Dodge Brothers layout featuring Dodge Brothers cars in Alliance. Thanks to Uncle Sam's extensive facilities for handling mails MOTOR AGE readers were quick to make it known they had spotted the error. They proved that they scrutinize MOTOR AGE closely, as might be ex-

pected of a group of intelligent and high-class business men. While this publication does not desire to test out the attentiveness of its subscribers through the medium of error in printed matter it is gratifying to MOTOR AGE to know that its reader-interest is so intense.

In publishing the Biery picture it was desired, first of all, to call attention to an unusually effective fall window display, and it would not be well to lose sight of that primary object just here. Whether Dodge Brothers or Chevrolet, or some other make—the merchandising suggestion is *there* and it furnishes a thought and inspiration which is worth passing along to the trade. We are all out to sell cars and create more interest in cars. Here is a display that contributes to that end. Look at the picture of the Biery window and then think about your own windows. Autumn offers a wonderful opportunity for colorful and catchy trims.

Fine Home for Sales

MEMPHIS, Tenn., Oct. 4.—A deal is reported closed whereby the Studebaker Sales Corporation, of Memphis, and the Studebaker Corporation of America will lease for a term of 12 years a large building to be erected at Union Avenue and Pasadena Place at a cost of about \$175,000. Construction begins Dec. 1. Outward dimensions will approximate 105 feet on two streets and 420 feet along Pasadena Place. The Studebaker Sales Corporation of Memphis is headed by J. M. Peterson and R. C. Helm.

Hard Fight on for the Speedway Championship

Lockhart Passes DePaolo for Second and Now Menaces Hartz' Leadership

WASHINGTON, D. C., Oct. 2.—The 1926 struggle for the automobile racing championship of America has become one of the tightest races in the history of the speedways, and is being fought out by three hard riding drivers, it is disclosed in an announcement by the Contest Board of the American Automobile Association, which supervises all sanctioned speed classics.

Frank Lockhart, in winning the Altoona 250-mile race Sept. 18, ousted Peter DePaolo, America's 1925 champion, from second place and is driving with a winning complex. Into the championship home stretch accordingly, there are now headed three drivers—the champion to be decided by the outcome of the next three races. These remaining three races begin with that at Salem, N. H., on Oct. 12, followed at Charlotte, N. C., by the second on Nov. 11. The final event will be run at Los Angeles, on Thanksgiving Day.

The closeness of the race was revealed in the A. A. A. Contest Board's compilation of point standings of speedway drivers. While Harry Hartz still leads with a total of 2,349 points, his place is in peril; Lockhart, the most determined driver the speedways have known in many years, is second, coming like the wind; and DePaolo is running third. Lockhart has 1,750 points, DePaolo, 1,475.

The standings of the first ten drivers, as revised by the distribution of points in the Altoona event, were announced by the Contest Board as follows:

Harry Hartz, 2,339; Frank Lockhart, 1,750; Peter DePaolo, 1,475; Bennett Hill, 930; Fred Comer, 629; Norman Batten, 620; Frank Elliott, 587; Earl Devore, 585; Dave Lewis, 550; and Earl Cooper, 465.

Honors to Oakland

DETROIT, Oct. 4.—In winning the award of the Grand Prix d'Honneur in the annual French motoring classic "Le Concours d'Elegance," the Oakland Six is bringing the honor to America for the first time in five years.

A standard Oakland carrying a Fisher body, won the competition by being judged the most beautiful car against the finest handiwork of France's noted body builders. Some of the cars in competition with the Oakland cost as much as 10 times as the winner.

Winners of the leading places, and body builders follow: First—Oakland Six, body by Fisher; Second—Isotta Fraschini, body by Vesters & Neyrinck; Third—Peugeot, body by Kellner;

A Leading Nash Dealer



J. E. Waters

The service department plays a very important part in the sale of new cars in the opinion of J. E. Waters, proprietor of the Waters Nash Co., of Los Angeles, whose firm stands at the head of Nash dealers in that city and Hollywood in the number of cars sold this year.

Fourth, Renault, body by Letourneur & Marchaund; Fifth—Hispano-Suiza, body by Million-Guier; Sixth—Rolls Royce, body by Manessius; Seventh—Voisin, body by Grummer.

Not Insurance Agents

WASHINGTON, Oct. 2.—A ruling against the State of New York, in its attempt to classify as insurance agents, automobile dealers who sell Chrysler cars which had been insured in Michigan and for which the premium was collected as part of the sale charge, has been given by the District Court of the Southern District of New York, a report of the decision to the Department of Justice states.

James A. Beha, state insurance superintendent, had held that the Palmetto Fire Insurance Co., of Michigan, was doing business without a license in New York State, in that automobile dealers sold the insurance company's policy with Chrysler cars. Arrangement for the insurance had been made by the Chrysler Co. in Michigan.

The insurance company took the matter to court. The decision held that it would be going too far "to say that the retailer is the agent of a company which neither directs nor pays him, nor has anything to do with him. . . . An agreement made in Michigan between the Chrysler Co. and the plaintiff does not involve an effecting or procuring of insurance in the State of New York."

Los Angeles Gets Set For Closed Car Salon

Thirty-one Exhibitors Will Be Represented in Col- orful Display

LOS ANGELES, Cal., Oct. 2.—Handsome and luxurious cars, beautifully blended lights, a profusion of chrysanthemums and splendid musical programs, will mark the third annual Enclosed Car Salon to be held in the ballroom at the Biltmore Hotel in Los Angeles, for four days, October 19 to 22 inclusive. It will be conducted by the Los Angeles Motor Car Dealers Association, of which all exhibitors are members.

The display this year will be unusually colorful. There will be 31 exhibitors represented in the display which will be unusually interesting to the general public because of the new models that have been introduced since the last motor car show was held. All space in the large ballroom has been allotted and the committee in charge of arrangements expects this showing to be the most successful yet conducted.

Arrangements have been made for most elaborate electrical illumination. The committee in charge is composed of F. E. Gunney, chairman; L. J. McCracken and J. M. Sterling.

Reserve Board Reviews Trade

WASHINGTON, Oct. 2.—Industrial activity and distribution of commodities continues in large volume and at a level higher than a year ago, with a general recession of the wholesale prices in August, reflecting price declines in agricultural commodities, the Federal Reserve Board's review of business conditions for August and September states.

Automobile production increased considerably in August and was larger than in any month since April, the review states. Factory employment and pay rolls, after declining in July, increased in August.

Increased demand for bank credit, in connection with the harvesting and marketing of crops and autumn trade was noted. Money rates continued to rise in September, rates on commercial paper advancing one-fourth of one per cent.

Nine-Story Garage

MEMPHIS, Tenn., Oct. 4.—Contracts were awarded for construction of a nine-story garage building at North Front St. and Court Ave., Memphis. It will have an outside area of 100x150 feet. The National Garages, Inc., of Detroit, and other cities will build the structure. There will be nine store spaces on the ground floor and a complete underground floor. Fred Callahan is president of the Memphis National Garage. The building will cost about \$800,000.

TRADE ASSOCIATION ACTIVITIES

PLAN DIVISIONAL MEETINGS

Cleveland Dealers Have Prepared Interesting Fall and Winter program

CLEVELAND, Oct. 2.—A new system of divisional meetings and general discussions of merchandising methods and other topics of interest to automobile distributors and dealers will be inaugurated by the Cleveland Automobile Manufacturers and Dealers Association during the Fall and Winter months.

To Hold Show Room Exhibits

CHARLOTTE, N. C., Oct. 4.—A special exhibition of closed models of almost every automobile sold in Charlotte will be held here the week beginning Oct. 25, according to a decision of the Charlotte Automotive Merchants' Association.

The exhibition will be a co-operative effort on the part of 16 dealers and distributors, who will display the cars in their showrooms.

Fred Anderson, president of the association, appointed several committees to arrange for this event. J. M. E. Taylor is chairman of the publicity committee and George Wadsworth is chairman of the finance committee. An advertising campaign will be used in connection with the exhibition.

The association last spring held its first event of this kind and the success of that effort was such that dealers here decided to utilize the plan to promote fall business, which now is generally satisfactory.

Baltimore Tourney Ended

BALTIMORE, Md., Oct. 2.—The Baltimore Automobile Trade Association, Inc., has ended its 1926 golf tournament, which was a most successful one. In the final play E. F. Backus had low gross score in Class A, with R. B. Livey second low gross. Carl Siecrist won low net in the same class, with C. P. Schultz second. In Class B Jack Winchester won low gross, with H. W. Maclelland second. In this class W. F. Kneip won low net, with P. F. Tracey second. J. A. Fromm won low gross and W. F. Terry second low gross in Class C. In this class L. M. Reuling won low net with R. O. Myers second.

A season trophy offered by A. J. Hunter was won by Jimmie Hinds for the low average net. The trophy was a silver water pitcher. W. F. Terry won the second trophy, a loving cup, for finishing second during the season.

Accessory Jobbers Meet

COLUMBUS, O., Oct. 4.—The Ohio Accessories Jobbers' Association held its annual meeting in Columbus September 23 and 24 in conjunction with that of the Ohio Council National Automobile Dealers' Association. The meeting of the accessories jobbers was held sepa-

ately from the sessions of the Ohio Council, but the members acted as hosts for the dealers.

A resolution was adopted approving the "standard" plan of payments for garage and auto repair equipment. This plan is the same as that approved by the national association.

Speakers were C. H. Fairhurst of Norwalk, Conn., representing the Clover Manufacturing Co., and C. R. Underwood, sales manager of the A. Schraeder's Sons Co., New York City. There was a general discussion of problems of the accessories distributing business.

Otto Berger of the Julius J. Bantlin Co., Cincinnati, was elected president, succeeding Charles S. Justus of Columbus. Curtis Sohl of the Griswold-Sohl Co., Columbus, was elected vice-president and E. R. Seeger of the Cleveland branch of the Pennsylvania Rubber and Supply Co. secretary-treasurer. E. M. Lewis, Dayton, was elected a member of the board of directors.

Banquet Plans Completed

CHICAGO, Oct. 4.—Plans have been completed for the annual banquet of the National Standard Parts Association which will be held on the evening of Nov. 16 during the association's annual convention and show Nov. 15-19. All events will be at Hotel Sherman.

J. G. Winterfeldt, show manager, in speaking of the banquet and entertainment planned for that evening said: "We want this to be one of the outstanding events of show week. The Louis XVI and Crystal rooms of the hotel will be thrown together with accommodations for fully 500 diners, at the same time leaving ample stage room for the performers. Formal speeches will be taboo for the evening. Members and guests may be accompanied by ladies and provision will be made for dancing following the show."

L. A. TIRE TRADE ORGANIZES

New Association Has Membership of 175 Distributors and Dealers

LOS ANGELES, Oct. 4.—An organization known as the Southern California Tire Dealers' Association has been formed by 175 Los Angeles and Hollywood tire distributors and dealers. The purpose of the organization is to improve conditions in the tire trade and protect the public against unscrupulous and dishonest trade practices, according to A. H. Rude, president of the A. H. Rude Co., General Cord distributors, Los Angeles, who was elected head of the body.

Many of the dealers report that numerous complaints are heard from indignant motorists because of the practice of certain unscrupulous dealers in buying up junk tires which are absolutely worthless, retreading them, and selling them as a usable product. The organization was unanimous in indorsing the movement to prevent this practice as much as possible by complete mutilation of wornout tires.

The following officers and directors were elected: President, A. H. Rude; vice-president, L. W. Fitzgerald; secretary, C. H. Rapp; treasurer, N. Bershon.

Three N. A. D. A. Speakers

DETROIT, Oct. 4.—For the October, November and December meetings of the Detroit Automobile Dealers' Association, three members of the advisory staff of the National Automobile Dealers' Association will appear as speakers.

On Oct. 25, H. D. Bullock will speak on "Salesmen Make the Profits." Edward Payton comes on Nov. 15 and Joseph Kellerman appears Dec. 17. The first two meetings will be held in the General Motors building and will be preceded by a dinner. The meetings will be for the members of the association, their sales managers and executives.

Democracy-Plus Dominated This Happy Shirt-Sleeve Banquet of Buckeye Dealers



Ohio Council, N. A. D. A. during Columbus banquet September 26. Coats were thrown aside and good fellowship prevailed

Plants' Casing and Tube Stocks Lower on Aug. 1

Rubber Association Reports On Extent of Production And Shipments

NEW YORK, Oct. 4.—Shipments of all classes of casings and tubes in July showed important increases over June, with consequent reduction in stocks of manufacturers, according to figures compiled by the Rubber Association of America, Inc. Production during the month was generally lower than in June, only high pressure inner tubes and fabric pneumatic casings showing increases.

Inventory of balloon casings stood at 3,246,844 on Aug. 1 as compared with 3,348,039 a month earlier and with 1,775,428 on Jan. 1. Production was reduced to 1,918,251 as against 2,197,580 in June, and shipments increased to 2,037,276.

High pressure cord casings increased to 2,407,726 from 2,136,057 reflecting the turn in the passenger car replacement market in which practically all of these casing are being sold. In July, 1925, shipments were 2,479,160 but at that time a considerable volume was still being shipped for car equipment. The casings inventory was reduced 699,824, production running 703,676 under shipments.

High pressure pneumatic casings showed shipments exceeding production by 218,083 with a drop of 230,826 in inventory. Shipments in July this year were 307,941 as against 809,290 in July, 1925, and production was 89,858 as against 447,145. Inventory was 893,611 as against 658,814.

Inventory of high pressure inner tubes was reduced 2,075,111 shipments exceeding production by 1,883,387. Inventory stood at 8,262,293 as against 4,677,647 Aug. 1, 1925. Total shipments were 4,310,981 as against 5,357,295 in July, 1925, and production was 2,427,594 as against 4,297,495. Both production and shipments exceeded those of the previous month this year.

Balloon inner tube inventory decreased 157,769, shipments exceeding production by 246,662. Production during the month declined to 1,869,089 from the 2,465,646 June total and shipments increased to 2,115,751 from the June 1,993,353 shipping total. Inventories were 4,686,819 as against 4,844,588 the month previous.

Inventory of solid and cushion tires declined from 211,633 to 177,962, shipments being 47,294 as against production of 33,677. In June production was 42,294 and shipments 48,824. In July, 1925, production was 75,288 and shipments 74,715, inventory standing at 152,587.

Coming Motor Events

Automobile Shows

1927 NATIONAL SHOWS	
New York.....	Jan. 8-15
Chicago.....	Jan. 29-Feb. 5
Baltimore, Md.....	Jan. 22-29
5th Regiment Armory	
Boston, Mass.....	March 5-12
Mechanics Bldg.	
Chicago.....	Jan. 29-Feb. 5
Annual Salon, Hotel Drake.	
Chicago.....	Nov. 8-13
Show and Convention of Automotive Accessories Association, Armory.	
Chicago.....	Nov. 8-13
Show and convention, Automotive Equipment Ass'n, Coliseum.	
Chicago.....	Nov. 15-19
Show and convention of the National Standard Parts Ass'n, Hotel Serman.	
Cincinnati.....	Jan. 15-22
Cleveland.....	Jan. 22-29
Public Auditorium	
Cumberland, Md.....	Jan. 31-Feb. 5
Armory	
Dallas, Tex.....	Oct. 9-24
Automobile Bldg.	
Elizabeth, N. J.....	Oct. 22-30
Second Regiment Armory	
Hartford, Conn.....	Feb. 19-26
State Armory	
Huntingdon, W. Va.....	Feb. 21-26
Vanity Fair Bldg.	
Indianapolis.....	Feb. 14-19
Auto Show Bldg.	
Kansas City, Mo.....	Feb. 12-19
Kansas City Automobile Show	
Los Angeles.....	Feb. 12-19
Annual Salon, Hotel Biltmore.	
Los Angeles.....	Oct. 19-22
Closed car salon, Los Angeles Motor Car Dealers' Assn., Biltmore Hotel.	
Louisville, Ky.....	Feb. 14-19
Jefferson County Armory	

Montreal, Can.....	Jan. 22-29
National Motor Show of Eastern Canada, Morgan Bldg.	
Newark, N. J.....	Jan. 15-22
Twentieth Annual Newark Automobile Show.	
New York.....	Nov. 28-Dec. 4
Annual Salon, Hotel Commodore	
Philadelphia.....	Jan. 15-22
Commercial Museum	
Rochester.....	Jan. 24-29
Edgerton Park	
Scranton, Pa.....	Jan. 24-29
Armory	
Sioux Falls, S. D.....	March 2-8
Springfield, Ill.....	Feb. 9-12
State Arsenal	
Syracuse.....	Feb. 7-12
State Armory	

Races

Dallas, Texas.....	Nov. 11
Laurel, Md.....	Oct. 23
Los Angeles, Cal.....	Nov. 25
Salem, New Hampshire.....	Oct. 12

Conventions

Automotive Equipment Association, Coliseum, Chicago.....	Nov. 8-13
California Automobile Trade Association, Hotel Richelieu, San Francisco.....	Dec. 17-18
Iowa Automotive Merchants Association, Des Moines.....	Oct. 28-29
National Association of Finance Companies, Palmer House, Chicago.....	Nov. 15-16
National Standard Parts Association, Hotel Sherman, Chicago.....	Nov. 15-19
National Tire Dealers Association, Inc., Memphis, Tenn.....	Nov. 16-18
Pennsylvania Automotive Association, Elks' Home, Philadelphia.....	Oct. 18-19
Society of Automotive Engineers, Transportation and Service Meeting, Boston, Mass.....	Nov. 16-18

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

November 4—Motor World Wholesale—Annual Marketing Issue
December 10—Operation and Maintenance—Service Station Equipment Issue
December 15—Commercial Car Journal—Good Roads Issue
January 1—Automobile Trade Journal—Annual Show Issue
January 6—Motor Age—Annual Show Issue
Jan. 15—Commercial Car Journal—New York Show Issue

NEW Automotive Literature

THE MODEL T FORD CAR, by Victor W. Page. 1926 revised and enlarged edition. This is a practical instruction book thoroughly covering the Ford and the Fordson tractor. The construction is fully treated and operating principles made clear. Many detail drawings and photographs are used to explain the text. Repair processes are illustrated and explained. Published by the Norman W. Henley Publishing Co., 2 West 45th street, New York City. Price \$2 a copy.

SALESMANSHIP AND BUSINESS EFFICIENCY, by James S. Knox. A

revised edition containing much material of interest to automobile dealers and salesmen. The author was formerly business consultant and lecturer on salesmanship for the National Automobile Dealers' Association. Published by the Knox Business Book Co., Oak Park, Ill.

Catalog No. 11, Wright Manufacturing Co., Lisbon, O. This is a comprehensive handbook on chain hoists, trolley hand cranes and allied equipment.

Open Factory Branch

ALMA, Mich., Oct. 2.—A factory branch at Philadelphia, has been opened by the Republic Motor Truck Co., Inc., according to J. C. Haggert, Jr., vice-president.

Prices and Weights of Current Passenger Car Models

SHIP WT. PASS. BODY STYLE. PRICE				SHIP WT. PASS. BODY STYLE. PRICE				SHIP WT. PASS. BODY STYLE. PRICE				SHIP WT. PASS. BODY STYLE. PRICE			
AUBURN "4-44"				CHEVROLET "X"				DU PONT "E"				HUPMOBILE "A"			
-----	5-p	Touring	\$1,145	1780	2-p	Roadster	\$510	3400	4-p	Roadster	\$2,800	2620	5-p	Touring	\$1,325
-----	5-p	Roadster	1,145	1875	5-p	Touring	510	3450	5-p	Touring	2,800	2800	5-p	Sedan	1,385
-----	2-p	Coupe	1,175	2030	2-p	Utility Coupe	645	3550	4-p	Coupe	3,200	2800	2-4-p	Coupe	1,385
-----	5-p	Sedan	1,195	2130	5-p	Coach	645	3750	5-p	Sedan	3,400				
"6-66"				CHRYSLER "50"				ELCAR "4-55"				"E"			
2850	4-p	Sp. Roadster	\$1,395	2230	2-p	Coupe	\$ 750	2560	5-p	Touring	\$1,095	3300	5-p	Touring	\$1,945
2860	6-p	Touring	1,895	2335	5-p	Coach	780	-----	4-p	Roadster	1,295	3360	7-p	Touring	2,045
-----	3-p	Coupe	1,445	2410	5-p	Sedan	830	-----	5-p	Coach	1,195	3355	2-4-p	Roadster	2,045
3020	5-p	Brougham	1,495	2575	5-p	Touring	\$1,075	-----	3-5-p	Landau R'dster	1,675	3465	2-4-p	Coupe	2,345
3070	5-p	Sedan	1,695	2780	5-p	Coach	1,195	2779	5-p	Coach	1,395	-----	5-p	Brougham	2,245
3070	5-p	Wanderer	1,745	2840	5-p	Sedan	1,295	-----	3-p	Coupe	1,295	3545	5-p	Sedan	2,345
"8-88"				"60"				"6-65"				3580			
(129 in. W. B.)												5-p Sedan 2,445			
3180	4-p	Sp. Roadster	\$1,695	2575	5-p	Touring	\$1,075	-----	5-p	Touring	\$1,295	-----	7-p	Sedan	2,495
3200	6-p	Touring	1,695	2545	2-p	Roadster	1,145	-----	4-p	Roadster	1,495	-----	7-p	Sedan Lim.	2,595
-----	3-p	Coupe	1,745	-----	2-p	Coupe	1,165	-----	3-5-p	Landau R'dster	1,675	JEWETT "6-45"			
3380	5-p	Brougham	1,795	2780	5-p	Coach	1,195	2779	5-p	Coach	1,395	-----	5-p	Touring	\$1,150
3450	5-p	Sedan	1,995	2840	5-p	Sedan	1,295	-----	3-p	Coupe	1,495	-----	5-p	Brougham	1,165
3450	5-p	Wanderer	2,045	"70"				2900	5-p	Sedan	1,695	-----	5-p	Brougham	1,195
(146 in. W. B.)								"8-81"				JORDAN "J"			
-----	7-p	Sedan	\$2,495	2805	2-4-p	Roadster	\$1,525	-----	7-p	Touring	\$2,265	2915	4-p	Playboy Road.	\$1,845
BUICK "115"				2785	5-p	Phaeton	1,395	3000	3-p	Coupe R'dster	2,195	3200	5-p	Sedan	1,945
2845	2-4-p	Roadster	\$1,195	3895	5-p	Coach	1,395	-----	3-5-p	Landau R'dster	2,295	3200	4-p	Victoria	1,945
2955	5-p	Touring	1,225	3060	5-p	Sedan	1,545	-----	4-p	Coupe	2,095	-----	5-p	Cus. Victoria	2,190
3020	2-4-p	Coupe	1,195	2935	2-4-p	Royal Coupe	1,695	-----	5-p	Sedan	2,265	-----	5-p	Cus. Sedan	2,190
3150	5-p	2 d. Sedan	1,195	2995	5-p	Brougham	1,745	4050	7-p	Sedan	2,765	Series "AA"			
3110	4-p	Coupe	1,275	3085	5-p	Royal Sedan	1,795	2260	5-p	Touring	\$765	3470	5-p	Sedan	\$2,495
3230	5-p	4 d. Sedan	1,295	3090	5-p	Crown Sedan	1,895	2500	5-p	Coach	795	3470	4-p	Victoria	2,495
"120"				"80"				ESSEX				KISSEL "55"			
(120 in. W. B.)				(185½ in. *)				FLINT "Z-18"				(124 in. W. B.)			
3800	4-p	Coupe	\$1,465	3775	5-p	Phaeton	\$2,545	2497	5-p	Coach	\$ 960	3020	5-p	Phaeton	\$1,585
3670	5-p	2-d. Sedan	1,395	3730	2-4-p	Roadster	2,595	2500	5-p	DeL. Coach	1,075	3660	7-p	Touring	1,685
3765	5-p	4-d. Sedan	1,495	4105	5-p	Sedan	3,095	-----	5-p	DeL. Coach	1,075	3065	2-p	Speedster	1,795
"128"				(192½ in. *)				"B-60"				3225			
(128 in. W. B.)				(198½ in. *)								4-p Tourster 1,795			
3570	4-p	Sp. Roadster	\$1,495	4225	7-p	Sedan	\$3,195	2683	4-p	Roadster	\$1,360	3190	2-p	Speedster	1,895
3635	5-p	Sp. Touring	1,525	4260	7-p	Sedan Lim.	3,595	2708	5-p	Touring	1,260	-----	4-p	Speedster	2,085
3805	4-p	Country Club	1,765	*Overall length.				-----	4-p	Sp. Roadster	1,495	3275	4-p	Speedster	2,185
-----	5-p	Coupe	1,850	CUNNINGHAM "V-6"				-----	4-p	Coupe Roadster	1,495	-----	2-p	Coupe R'dster	1,795
3940	5-p	Brough. Sedan	1,925	4500	4-p	Sp. Touring	\$6,150	3093	5-p	Sedan 4d.	1,495	-----	4-p	Coupe R'dster	1,895
4025	7-p	Sedan	1,995	4600	7-p	Touring	6,650	2933	5-p	Brougham	1,450	-----	5-p	Brougham	1,695
CADILLAC "314" Standard Line				4700	4-p	Coupe	7,600	(120 in. W. B.)				-----	5-p	Spec. Bro'm	1,795
(132 in. W. B.)				5000	6-p	Limousine	8,100	3139	4-p	Sport Road.	\$1,645	-----	5-p	Bro'm Sedan	1,895
4170	5-p	Brougham	\$2,995	DAGMAR "6-70"				3189	5-p	Touring	1,450	3590	5-p	De Luxe	\$2,585
4190	2-p	Coupe	3,100	3750	4-p	Roadster	\$3,500	3310	4-p	Sp. Touring	1,645	4010	7-p	Sedan De Luxe	3,085
4270	5-p	Victoria	3,195	3800	4-p	Sp. Tourer	3,500	3414	4-p	Coupe	1,850	3640	7-p	Berline Sed	
4370	7-p	Sedan	3,250	3700	4-p	Phaeton	3,500	3529	5-p	Sedan	1,925	-----	De Luxe	3,185	
4460	2-p	Sport Coupe	3,500	4200	4-p	Petite Coupe	4,500	(130 in. W. B.)				"75"			
4690	5-p	Sport Sedan	3,650	4200	4-p	Petite Sedan	4,500	3294	7-p	Touring	\$2,125	3220	5-p	Phaeton	\$1,985
(138 in. W. B.)				4500	4-p	De Luxe Coupe	4,750	3649	7-p	Sedan	2,395	3630	7-p	Touring	2,085
4480	7-p	Imperial	\$3,535	4700	5-p	Sedan	4,700	With Starter, Dem. Rims and Balloon Tires				3275	2-p	Speedster	2,195
Custom Built (132 in.)				4800	7-p	Sedan	4,750					3335	2-p	Tourster	2,195
4220	2-p	Roadster	\$3,350	3150	5-p	Touring	\$1,785	"6-60"				3360	4-p	Speedster	2,295
4300	2-p	Conv't Coupe	3,450	3100	2-p	Roadster	1,985					3425	2-p	Speedster	2,485
(138 in. W. B.)				3200	4-p	Sp. Touring	1,985	DAVIS "92-27"				-----	4-p	Speedster	2,485
4285	7-p	Touring	\$3,450	3500	5-p	Sedan	2,445	2915	5-p	Legion. Tour.	\$1,495	-----	2-p	Coupe R'dster	2,195
4275	5-p	Phaeton	3,450	DAVIS "93-27"				3000	5-p	Sedan	1,595	-----	4-p	Coupe R'dster	2,295
4465	5-p	Sp. Phaeton	3,975	2325	5-p	Touring	\$1,285	3060	5-p	Imperial Sedan	1,795	3565	5-p	Brougham	2,095
4465	5-p	Coupe	3,855	2500	5-p	Sedan	1,285	"92-27"				-----	5-p	Spec. Bro'm	2,195
4465	5-p	Sedan	3,995	2450	3-p	Coupe	1,285	2915	5-p	Legion. Tour.	\$1,495	3760	5-p	Bro'm Sedan	2,295
4580	7-p	Suburban	4,125	DIANA "St. 8"				3000	5-p	Sedan	1,595	-----	5-p	Spec. Bro'm	2,495
4615	7-p	Imperial	4,350	2995	5-p	Roadster	\$1,795	3060	5-p	Imperial Sedan	1,795	(139 in. W. B.)			
CASE J. I. C.				3170	5-p	Palm Bch. Rds.	1,995	"93-27"				3910	5-p	Bro'm Sedan	
3260	3-p	Roadster	\$1,840	3275	5-p	De Luxe Sedan	2,195	"93-27"				4080	7-p	Sedan De Luxe	\$2,985
3290	5-p	Touring	1,885	3160	5-p	Cabriolet	2,095	"93-27"				4125	7-p	Berline Sed	3,485
3470	5-p	Sp. Touring	2,160	3640	7-p	Sedan (135 in. W. B.)	2,695	"93-27"				-----	De Luxe	3,585	
3640	5-p	Sedan	2,590	3640	7-p	Berline Sedan	2,895	"93-27"				LINCOLN			
3650	5-p	Brougham	2,590	3640	5-p	Town Car	5,000	"93-27"				4460	2-p	Roadster	\$4,000
"Y"				DODGE BROTHERS				FRANKLIN "11"				4580	7-p	Touring	4,000
3950	7-p	Touring	\$2,225	2448	2-p	Roadster	\$ 795	2800	3-p	Sport Road.	\$2,690	4730	4-p	Sport Phaeton	4,900
4320	7-p	Sedan	2,975	2538	2-p	Special Roadster	845	2845	5-p	Touring	2,635	4750	4-p	Coupe	4,600
CHANDLER BIG SIX				2567	5-p	Touring	795	2845	5-p	Touring	2,635	4885	4-p	Sedan	4,800
3090	2-4-p	Roadster	\$1,695	2642	5-p	Spec. Touring	845	2965	3-p	Coupe	2,645	4760	5-p	Sedan	4,900
3085	5-p	Sport Touring	1,545	2497	2-4-p	Sport Roadster	945	-----	3-5-p	Coupe	2,760	4890	7-p	Sedan	5,100
3223	7-p	Touring	1,645	2617	4-p	Sport Touring	880	-----	4-p	Victoria	2,790	4945	7-p	Limousine	5,300
3460	5-p	20th C'y Sedan	1,495	2589	2-p	Coupe	845	-----	5-7-p	Sedan	2,840	"Jr.-8"			
3525	5-p	Met. Sedan	1,595	2632	2-p	Spec. Coupe	895	3070	4-p	Phaeton	\$1,395	3035	4-p	Roadster	\$2,150
-----	4-p	Coupe	1,675	2811	5-p	Sedan	895	3030	4-p	Roadster	1,395	3055	5-p	Touring	1,785
3594	7-p	Sedan	1,795	2883	5-p	Spec. Sedan	945	3280	5-p	Custom Bro'm	1,645	3335	5-p	Sedan	2,285
3629	7-p	Berline	2,095	2920	5-p	DeL. Sedan	1,075	3210	4-p	Landau R'dster	1,685	3330	5-p	Brougham	2,285
Standard Six (109 in. W. B.)				DUESENBERG				GARDNER "6B"				LOCOMOBILE "90"			
2325	5-p	Touring	\$ 945	3920	2-p	Roadster	↑	3070	4-p	Phaeton	\$1,395	4475	4-p	Sportif	\$5,500
2565	5-p	De Luxe Tour.	1,005	3970	4-p	Roadster	↑	3030	4-p	Roadster	1,395	4370	4-p	Roadster	5,900
-----	2-4-p	Sport R'dster	1,135	3700	5-p	Phaeton	↑	3280	5-p	Custom Bro'm	1,645	4680	4-p	Victoria Coupe	6,950
2580	5-p	Sedan	995	4380	4-p	Sp. Phaeton	↑	3280	5-p	Imp. Sedan	1,685	4842	5-p	Victoria Sedan	7,300
2520	2-p	Coupe	1,035	4115	5-p	Sedan	↑	3280	5-p	Victoria Bro'm	1,695	4615	7-p	Cabriolet	7,500
-----	5-p	De Luxe Sedan	1,095	4500	7-p	Sedan	↑	3350	4-p	Sp. Roadster	1,795	4930	7-p	Suburban	7,500
-----	2-p	De Luxe Coupe	1,125	†Manufacturers do not quote list prices.				3440	5-p	Coach	1,195	4615	7-p	Brougham	7,500
Special Six (116 in. W. B.)								3560	4-p	Brougham 4d.	1,495	"48"			
2800	5-p	Touring	\$1,145					3685	7-p	Sedan	1,695	5030	4-p	Sportif	\$7,460
2975	5-p	Sport Touring	1,295					HERTZ "D-1"				5330	7-p	Touring	7,460
2950	2-p	Coupe	1,195									5640	7-p	Touring Lim.	9,500
-----	2-p	De Luxe Coupe	1,285					HUDSON "Super Six"				5600	5-p	Victoria Sedan	10,050
3145	5-p	Sedan	1,295									5464	6-p	Brougham	10,400

Prices and Weights of Current Passenger Car Models

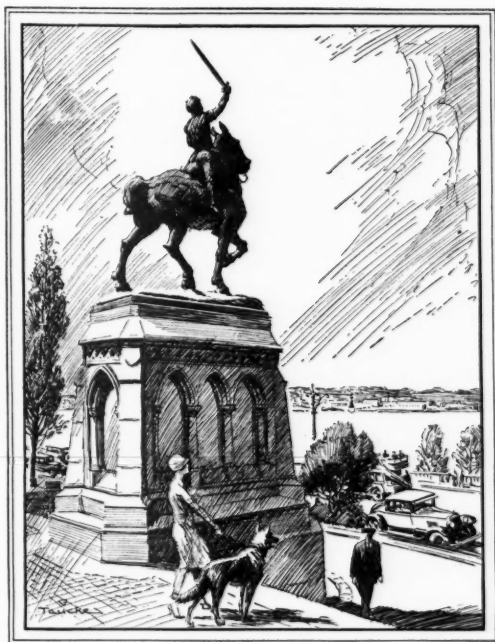
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Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

MAKE AND MODEL	Wheel Base (Inches)	Tire Size	Decimals-Balloons	Make and Model	Bore and Stroke	Rated H.P.	Piston Displacement	Valve Arrangement	Camshaft Drive	Piston Material	No. Main Bear.	Crankshaft Vibration Damper?	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Radiators	Shutters?	Carburetor	Air Cleaner?	ELECTRICAL SYSTEM		Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	REAR AXLE		BRAKES		Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make	ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS
																					Ignition System	Generator and Starter Make				Type and Make	Gear Ratio	Foot—Type and Location	Hand—Type and Location				
Auburn 4-44	120	30x5 25	30x5 25	Lyc. CF 4-31x55	21.0	206	L L L	L L L	He. Ch. C.I.	Al.	5	N	P.C.	N	Th.	N	N	N	N	N	N	Remy	Remy	P.B&B	W.G.	1/2 Sal.	5.10	E-F	H	Ross	55 1/2	Oe-Ju	A-K—Atwater-Kent
Auburn 6-66	121	30x5 25	30x5 25	Lyc. 4SM 6-31x54 1/2	25.3	224	L L L	L L L	Ch. C.I.	Ch. C.I.	4	N	P.C.	N	Pu.	N	N	N	N	N	N	Remy	Remy	P.B&B	W.G.	1/2 Col.	5.10	B-F	E-T	M	57	Pr-Do	A-L—Auto-Lite
Auburn 8-88	129	30x5 25	30x5 25	Lyc. 4HM 8-31x54 1/2	33.8	299	L L L	L L L	Ch. C.I.	Ch. C.I.	5	N	P.C.	N	Pu.	N	N	N	N	N	N	Remy	Remy	P.B&B	W.G.	1/2 Col.	5.10	B-F	E-T	M	57	Pr-Do	Ada—Adams
Buick 115	146	32x6 20	32x6 20	Own. Std. 6-31x54 1/2	23.4	207	I I I	I I I	He. Ch. C.I.	He. Ch. C.I.	4	Y	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.90	E-F	I-R	M	48	Pr-Ze	Al—Alumet
Buick 120 & 128	120-128	33x6 00	33x6 00	Own. Mast. 6-31x54 1/2	29.4	274	I I I	I I I	He. Ch. C.I.	He. Ch. C.I.	4	Y	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.70	E-F	I-R	M	48	Pr-Ze	Ans—Austel
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R	M	48	Pr-Ze	B&B—Borg & Beck
Cadillac 314	132-138	33x6 75	33x6 75	Own. 314 8-31x55 1/2	31.2	314	L L L	L L L	Ch. C.I.	Ch. C.I.	3	N	P.C.	3	Pu.	Y	Y	Y	Y	Y	Y	Delco	Delco	D.Own.	W.G.	3/4 Own.	4.45	E-F	I-R</				

*Five hundred
color and upholstery
combinations + + fifty
body styles and types*



Due to its performance supremacy, Cadillac has long been distinctively individual—in a class apart as The Standard of The World.

Now Cadillac records a great new success in the personalization of the motor car, by presenting the new, 90-degree, Cadillac in 50 Body Styles and Types, in 500 Color and Upholstery Combinations.

Thus each Cadillac, while one with all Cadillacs in precision and fineness of manufacture, is a triumph of distinctive individuality, affording unequalled opportunity for personal selection in style and color.

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of an ever growing
public*

The remembrance of what Cadillac always has been upsets in the average buyer's mind the most ardent competitive claims of equality. The proof of what it is, as exemplified in the soul-satisfying performance of the new 90-degree, eight-cylinder Cadillac, brings all argument or discussion to an abrupt close.

Priced from \$2995 upward, f. o. b. Detroit

NEW 90 DEGREE

CADILLAC

DIVISION OF GENERAL MOTORS CORPORATION



Var—Varies
X—Sleeve valve
Y—Yes

R—Rectifier
S—Semi-elliptic
Se—Servo

OW—Oil cups with wick feed
P—Single plate
Pr—Pressure gun

I—Internal rear wheels
J—Three-quarter elliptic
K—Cone

E—External transmission
F—Fabric
F—Filter

B—Both internal and external, four wheels

(Continued on page 48)

Mechanical Specifications of Current Passenger Car Models—Continued

(This list comprises cars distributed on a national basis)

ENGINE										ELECTRICAL SYSTEM		REAR AXLE		BRAKES		Steering Gear—Make		Rear Springs—Type and Length		Chassis Lubrication—Type and Make		ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Wheel Base (Inches)	The Size	Decimals-Balloons	Make and Model	Number of Cyls.	Bore and Stroke	Rated H.P.	Plate Displacement	Valve Arrangement	Camshaft Drive	Platen Material	No. Main Bearings	Crankshaft Vibration	Oil Cleaner?	Cooling System	Thermosstat?	Radiators	Carburetor	Air Cleaner?	Ignition System	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universal—Type and Make	Type and Make	Gear Ratio	Foot—Type and Location	Hand—Type and Location	4 Wheel Type (Optional)	Own.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	Reos.	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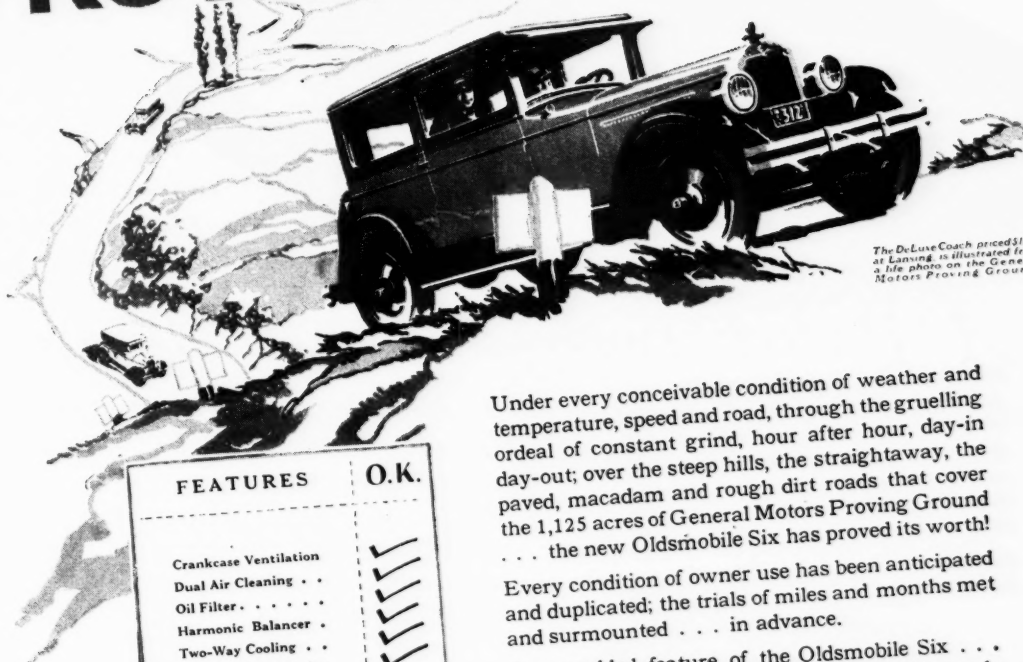


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THE STANDARD
COACH
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Under every conceivable condition of weather and temperature, speed and road, through the gruelling ordeal of constant grind, hour after hour, day-in day-out; over the steep hills, the straightaway, the paved, macadam and rough dirt roads that cover the 1,125 acres of General Motors Proving Ground . . . the new Oldsmobile Six has proved its worth!

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Proved to provide still greater power, still longer life, still smoother performance—proved conclusively to constitute "the car you can recommend to your best friend!"

Proved more emphatically than ever to ask no favors, fear no road!

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PRODUCT OF GENERAL MOTORS

Zen-Zenith
V-Cantilever
Va-Varies
X-Quarter valve
Y-For

Thermo-synphon
Pump
Q-Quarter elliptic
R-Rectifier

Oil and Grease Cups
O-Oil cups with wick feed
P-Single
Pr-Pressure gun

four wheels
L-R-Internal wheels
J-Three-quarter elliptic
K-Cone

transmission
F-Fabric
FI-Full floating

both internal and
external, four wheels
BO-Bevel Gear Overhead shaft

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Empire Bolts are the result of eighty-one years' concentration on the production of just one line—bolts, nuts and rivets.

Coincident with the building of the largest volume of business in America has gone the constant improvement of the product. The house of Russell, Burdsall and Ward has pioneered in practically every improvement in the manufacture of bolts, nuts and rivets, most of the machinery for these improvements being the inventions of our own executives or their engineers. The unbe-

lievably accurate Empire *New Process* bolt thread is an example of this constant bettering of the product.

Bolts of exceptional quality for every purpose and in any quantity—that is what the name Empire stands for.

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Branch Office: Sears Building CHICAGO	Branch Office: General Motors Bldg. DETROIT	Branch Factory: ROCK FALLS, ILL.	Struble & Gillette 150 Jackson Street SEATTLE	Mayhew & Harnell, Inc. 119-121 Eleventh Street SAN FRANCISCO
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NATION wide effort to bring about some method of moving the ever increasing number of used cars on the market has developed but one real solution—Spray Painting.

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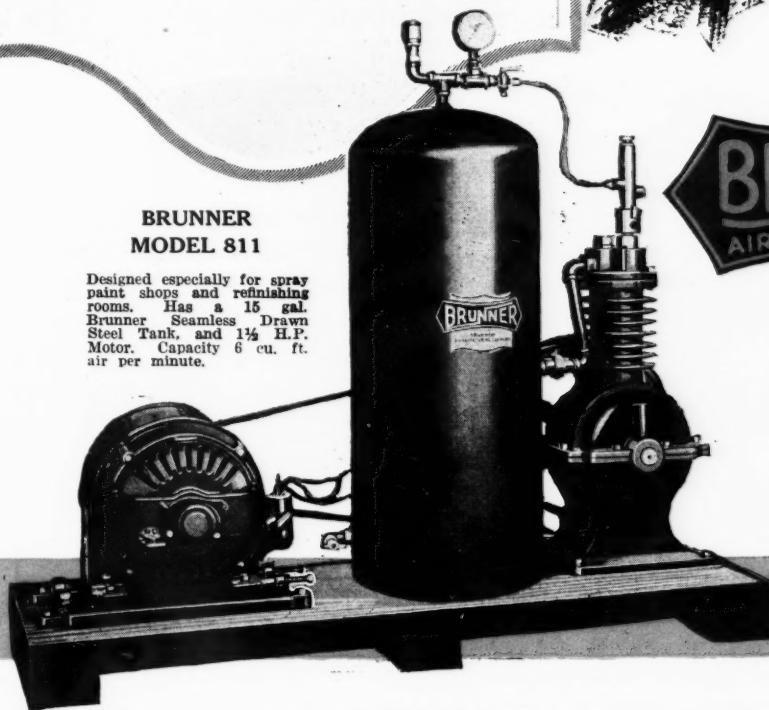
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Designed especially for spray paint shops and refinishing rooms. Has a 15 gal. Brunner Seamless Drawn Steel Tank, and 1½ H.P. Motor. Capacity 6 cu. ft. air per minute.



BRUNNER MODEL 500 SPRAY GUN

Air consumption 4 cu. ft. per minute. Light and easily operated and cleaned. Container has one quart capacity. 2 finger trigger will not tire operator.

BRUNNER MFG. CO.,
Utica, N. Y. Dept. M.A.

Gentlemen:—

Please send me your Paint Spray Circular at once.

Name

Address

KISSEL

CUSTOM



BUILT

\$1895

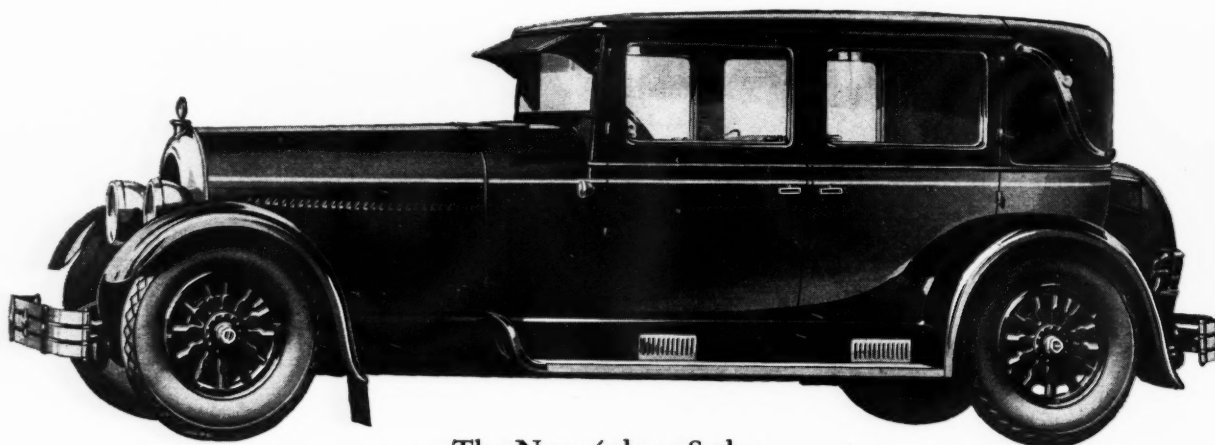
for the 4-door Sedan

*f. o. b. factory
Standard Equipped*

\$2295 for the
4-door Straight Eight

*f. o. b. factory
Standard Equipped*

*Motor by Kissel
Body by Kissel*



The New 4-door Sedan

THE KISSEL MOTOR CAR COMPANY

*The only American-built car
that has all major units completely*
CUSHIONED-IN-RUBBER

All major units completely *cushioned-in-rubber*. That means no shackles, spring bolts or working joints! No more oiling of these and other points! No more rattles or squeaks!

Here are other notable improvements which stamp Kissel as a leader in fine car building. For instance, this new car is lower cradled—the distance from the ground to the top is only 70 inches. It fairly hugs the road at high speed without side-sway, slipping or wandering.

Extra riding comfort is afforded by a new wheelbase. The Chase Velmo Mohair Velvet Upholstery, Marshall Springs and form fitting seats are indicative of the interior luxury.

There is a new Straight Line Drive which means still greater smoothness of performance. No change, however, has been made in either the Six or Straight Eight Engines. Anyone who knows motors will tell you that the Kissel power plants are recognized to be as near engineering perfection as motors can be.

Note particularly the new flat fenders and the narrow corner posts which give a wider sweep of vision. The new 4-door Sedan is unquestionably America's greatest fine car value. Demand for it has already broken all Kissel production records for a single model.

If you are interested in finding out more about the new Kissel line write or wire us for complete information.

A large eyeful of *sales suggestions*

So many and so varied are the tools on the Crescent-Smith & Hemenway Display Board that few customers can glance at it without seeing one or more tools that fill an immediate or future need.

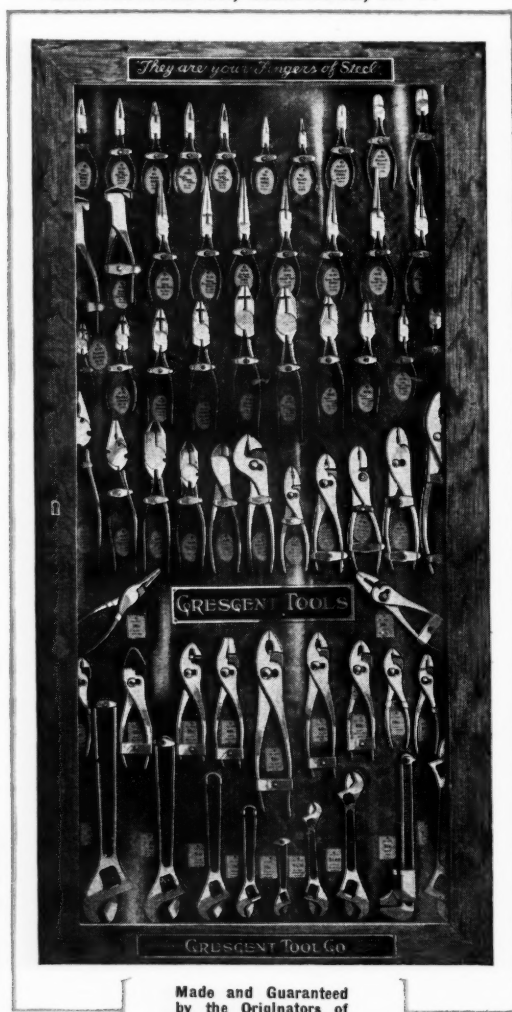
It offers an unusually profitable

means for cashing in on a moderate area of available wall space. It is both attractive and practical. We supply this display to dealers at nominal cost.

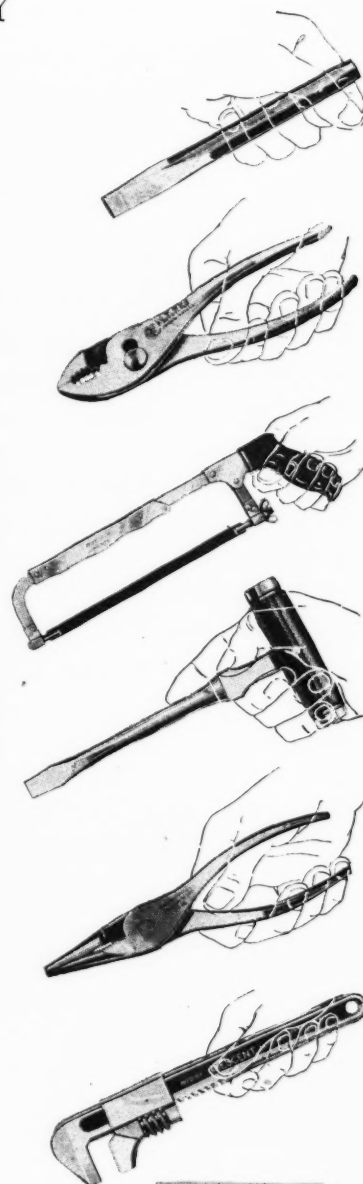
Your jobber carries the complete line of Crescent-Smith & Hemenway Tools.

CRESCENT TOOL COMPANY

208 Harrison St., Jamestown, N. Y.



Made and Guaranteed
by the Originators of
the Crescent Wrench



CRESCENT
Smith & Hemenway
complete line of tools
for mechanics and electricians



Watch Arvin Wallop 'em!

ARVIN'S goin' to turn loose an advertising wallop that will knock these cold car drivers clear loose from their pocket-books. We're jabbing them in the eye with full page space this month, but on November 5th we're going to let fly with a two-color double page advertisement in The Saturday Evening Post. Get a ringside seat and have a good stock of Arvin Heaters handy. You'll need them when this first "two-color double" gets in its work. Owners of Ford, Chevrolet, Overland and Dodge cars alone have bought more than a million Arvin Heaters. And NOW that there's an Arvin for EVERY car, think what the harvest will be in profits to you. Your opportunity is *unlimited*. These cool, nippy nights and frosty mornings will start your Arvins moving if you have 'em to move.

INDIANAPOLIS PUMP & TUBE COMPANY

General and Sales Offices—INDIANAPOLIS

Also Makers of Indianapolis and De Luxe Tire Pumps, Automobile Jacks and Dan Patch Coaster Wagons for Children

ARVIN HEATER

ARVIN SPECIAL Manifold Heater for

FORD	\$6.00
FORD Hot Spot	\$6.00
CHEVROLET	\$6.50
DODGE	\$9.00

ARVIN REGULAR Manifold Heater for

FORD	\$1.75
FORD Hot Spot	\$1.75
OVERLAND Whippet	\$3.00
STAR-4	\$3.00
HUDSON	\$6.00
CHRYSLER-60 and 70	\$6.00
NASH Special-6	\$6.00
STUDEBAKER Std.-6	\$6.00
BUICK Standard-6	\$6.00
BUICK Master-6	\$6.00
HUPMOBILE-6	\$6.00

ARVIN UNIVERSAL Exhaust Heater for

ALL CARS	\$7.50
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They Sure Do Heat!

TWELVE MILLION PEOPLE ARE TODAY USING STEWART-WARNER PRODUCTS

Quality Heaters for Winter Profits

The Kind that Give Complete Owner Satisfaction



The Stewart-Warner Valve installed on the exhaust pipe. Heavy asbestos gaskets make this installation absolutely leak-proof. The one valve fits practically all makes of cars.

The Stewart-Warner Heater is easily operated by a convenient dash control, making it possible to regulate the temperature of the car interior to a fine degree. With a Stewart-Warner the car owner and his guests ride in perfect comfort.

RAIL TYPE

- Model 268-A - - - \$17.50
26 in. x 3 3/4 in.
Model 268-B - - - \$16.75
21 in. x 3 3/4 in.
Model 268-C - - - \$16.50
Ford Type 21 in. x 3 3/4 in.
West of 100° Meridian add \$1.50

Stewart-Warner Accessory Equipment COMPLETE—FOR ALL CARS

Bumpers - Fender Guards - Speedometers
Heaters - Shock Absorbers
Electric Horns - Electric Windshield Cleaners
Rear Vision Mirrors
Vacuum Tanks - - Carburetors for Fords

—AND— for the Home —

STEWART-WARNER MATCHED-UNIT RADIO

Car and accessory dealers can make substantial profits on Stewart-Warner Heaters while—at the same time—insuring perfect satisfaction—which entirely eliminates come-back grief. Every part—[1] drawn steel element, instead of a cast-iron one; [2] highly perfected valve installation; [3] exterior finish; and [4] dash control—in keeping with the customer's desire for a heater that functions perfectly and stays right.

FLOOR TYPE

- Model 211-D - - - \$22.00
Floorplate 14 1/4 in. x 10 1/4 in.
Model 212-D - - - \$25.00
Floorplate 26 3/8 in. x 7 1/4 in.
West of 100° Meridian add \$1.50



Types and Sizes For All Cars [One Valve]

Three sizes in the Floor Type and two sizes in the Rail Type—with a universal valve installation—provides equipment for practically all cars. So many new cars are coming thru without heaters that a wonderful opportunity is offered the car dealer and accessory dealer to reap this substantial profit.

STEWART-WARNER SPEEDOMETER COR'N
1826 DIVERSEY PARKWAY
CHICAGO, U. S. A.

STEWART-WARNER

for better accessories

A hit! Hundreds are asking for this Protex tire and tire-chain size chart. Hundreds are using it.

Get yours. Fill out and mail the coupon below. NOW!



Have you yours?

FREE!

Protex Tire and Tire-Chain Size Chart. Nothing else like it ever published before. Hundreds now using it.

Here in one valuable chart are three important features.

A tire and tire chain size chart. A tire chain size conversion table that may reduce your stock investment. And a display wall hanger on Protex Chain. In place on the photograph of the tire is an actual, metal Protex cross chain. Small wonder it catches all eyes.

No wonder so many service stations, garages and dealers are now using this chart. Get yours.

There is a convenient coupon below for every busy man. Send it along.

This is only a part of the merchandising campaign now running on Protex Chains. Magazine advertising, direct mail campaigns, folders, in fact every form of profitable advertising to

help you build a bigger business on the need for better chains.

Remember, Protex Chains give five new advantages that the ordinary chain never brought out.

1. Longer wear
2. Noiseless
3. Can't cut tread
4. Give better traction
5. Stop skidding, eliminating side-skid entirely.

The big selling season is less than 60 days away. ACT! Your jobber will supply you. NOTHING JUST AS GOOD. PROTEX CHAIN CO., INC., Waynesboro, Penna.

Accessory Sales Co., 1834 Broadway, New York City.
Gen. R. F. Cotten, 201 N. Broad St., Philadelphia, Pa.
Walter Eckhouse & Co., 616 S. Michigan Ave., Chicago, Ill.
G. A. Ashton Co., 1547 University Ave., St. Paul, Minn.
W. C. Rice Co., 623 Larkin St., San Francisco, Cal.
The Carroll Co., 1323 Wall St., Dallas, Texas.

Fill in—
Tear Out—
Mail.



THIS TEST AMAZES

Put a horse-shoe linked Protex Chain on one tire and the ordinary-type chain on the other. Run the car over BARE CONCRETE roads until one chain breaks down. Then take off the Protex Chain and put it under the seat for two seasons additional skid-proof service.

Protex Chain Co., Inc. Waynesboro, Penna.

Gentlemen: Sure I want the Protex Chart. Shoot it along—also the name of the jobber handling your chains in my territory.

Name

Address

The New CHANSON



The only Heater that **FITS ALL CARS**

Here's a good chance to make your Fall and Winter profits take a nice upward jump! Now, for the first time, you can increase your Dull Month profits selling an exhaust type heater that is **UNIVERSAL**—a heater that can be installed in the front or rear compartment of *any* car.

It's the new R-14 CHANSON UNIVERSAL



Chanson Shock Absorbers

Standard Front installation with axle clamp. Inset above shows the lower tension spring and upper stationary brake drum, with full floating friction ring saving wear on strap.

Never Need Adjustment

One model fits all cars—all springs—all tires. After CHANSON Shock Absorbers have been properly installed, they never need adjustment during the life of the car. It is practically impossible to break the strap or spring in operation and the strap is prevented from ever wearing out by the friction ring.

Each set of CHANSONS is shipped complete with fittings for all American cars. There are only three exceptions for which special fittings are furnished separately without charge. You will not accumulate bins full of odds and ends if you sell CHANSONS.

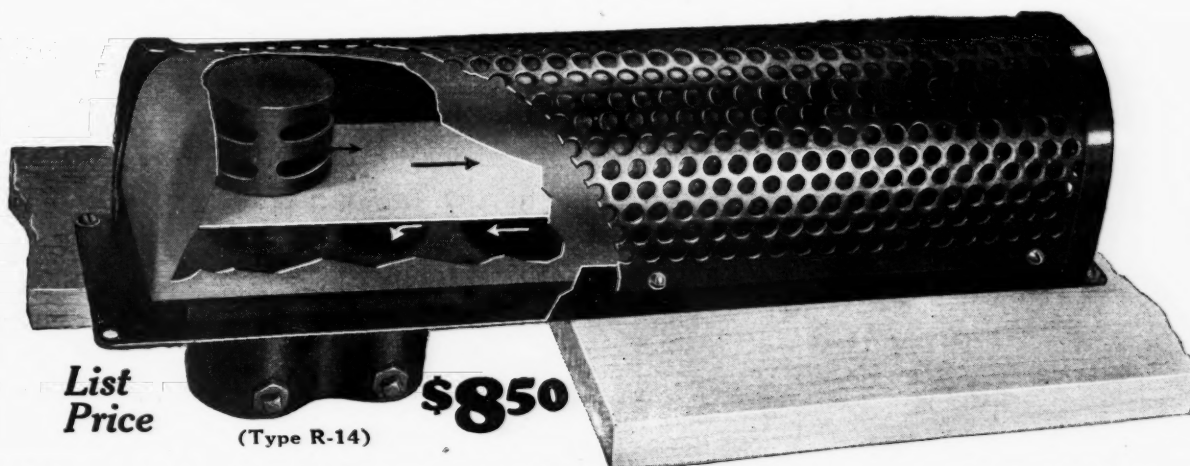
It is the only highly efficient heater that has both inlet and outlet at one end. This simplifies the installation because it is only necessary to cut one small hole through the floor or toe-board.

On other heaters it is necessary to cut two holes, one at one end of the heater for inlet and one at the other end for outlet. On many makes of cars, however, it is impossible to cut two holes on account of mechanical interference.

Therefore you can readily see the advantage of stocking the new CHANSON UNIVERSAL Type Heater. One model fits all cars. A small stock investment, yet not a single sale to be lost because you can make installation on *any* car.

The new CHANSON UNIVERSAL Type Heater also has many other exclusive, patented features that make it the best buy for you and your customers. Read the opposite page.

UNIVERSAL Type Heater



List
Price

\$8.50

(Type R-14)

Instant Heat—No Exhaust Noises

Three Heaters in One You Can't Lose a Sale!

This new R-14 CHANSON UNIVERSAL Type Heater is really three heaters in one. It can be used as a rail or heel-board heater, as well as a toe-board heater. You can't lose a sale. *It will fit any car*, including the new Fords with Holley Hot Spot Manifold, as a rail, heel-board or toe-board heater.

The baffle method employed to obtain the fullest measure of heat from the heater is exclusive with CHANSON—and patented. Look at the photograph above. Note the baffle running clear through the center of the heater. It makes the heat travel twice its length, thus giving the efficiency of a heater twice its size.

In actual test, a CHANSON generated as much heat in 5 minutes as an ordinary unbaffled heater did in 20 minutes.

Patented Universal Butterfly Valve on every CHANSON Heater regulated by a convenient dash control. Muffler type intake eliminates noise.

Model R-14 Fits front or rear compartment of any car. Length over all, fourteen inches. Retails for \$8.50.

Model R-25 Length over all, twenty-five inches. Retails for \$15.00.

Valve, dash control, tail pipes and all fittings for every size exhaust are shipped complete with each heater.

Most motorists drive their cars all winter now. Sell them CHANSON Heaters. One profit manufacture makes possible low retail prices and a wide margin of profit for you.

To take the slump out of Fall and Winter sales, mail the coupon now for prices, discounts and information about the complete line of CHANSON Heaters and CHANSON Shock Absorbers.

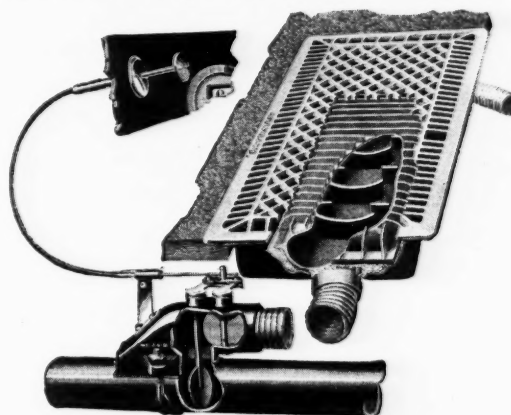
ILLINOIS IRON AND BOLT CO.

Est. 1864

(Chanon Devices Division)

Dept. 1018, Carpentersville, Illinois

The complete line of CHANSON Heaters—Flush, Heelboard, Rail and Universal meet every requirement.



Model 1-F, register or flush type with satin finished, cast-aluminum grille, and CHANSON baffled cast-iron heating element, complete with dash control valve, retails for \$20.00. (Style of baffled plates shown in cut-away section)

MAIL THIS COUPON

ILLINOIS IRON AND BOLT CO.,
Chanon Devices Division,
Dept. 1018, Carpentersville, Ill.

Gentlemen: Please rush prices, discounts and full information about ☐ Chanon Car Heaters ☐ Chanon Shock Absorbers.

Name.....

Street.....

City..... State.....

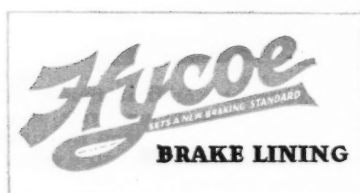


CHARACTER

Hycoe Brake Lining cannot be classified as simply another brake lining. It is something more than brake lining—it is *Hycoe*. It is the specialized product of an organization of manufacturing specialists, whose quality products have dominated the field for over a quarter of a century.

Hycoe Brake Lining is specified for original equipment by the leading manufacturers of quality automobiles.

Let Hycoe Brake Lining help you to maintain the high character of your business.



THE MANHATTAN RUBBER MFG. COMPANY

Executive Offices and Factories: Passaic, N. J.

Branches:

Chicago
Detroit

New York
Birmingham

Boston
Cleveland

Joplin
Los Angeles

Minneapolis
New Orleans

Philadelphia
Pittsburgh

Salt Lake City
St. Louis

The Up-to-date Motor Car

Clean Oil—Clean Air—No Dilution

Important factors which now add years
to the motor car's life

Never in the history of the automobile has development been so marked and progress so swift as now.

Especially in those new devices which mean added economy and convenience to the owner, and longer life to the car, the industry is making tremendous strides.

Naturally dealers are interested to know about these new devices.

We are therefore offering free to interested dealers full information on any of the following timely subjects:

- 1 *Why air cleaners are used on the majority of cars, and the air cleaner's function.*
- 2 *Why oil filters are used on the leading makes of cars, and the oil filter's function.*
- 3 *The cause of and the effects of dilution and water in the crankcase.*

If you want to be fully informed on the new devices that are insuring the automobile new life, simply check the number in the coupon below which corresponds to the number of the subject on which you want information, and a bulletin will be sent you free.

AC Spark Plug Company, FLINT, Michigan

AC-SPHINX
Birmingham
ENGLAND

Makers of AC Spark Plugs—AC Speedometers—
AC Air Cleaners—AC Oil Filters

AC-TITAN
Levallois-Perret
FRANCE

AC SPARK PLUG COMPANY, Information Division, FLINT, MICHIGAN

Gentlemen: I want to know more about the modern motor car and its improvements,
and am especially interested in the subject I have checked here:

① ② ③

My Name is

Address

City

AC

SPARK PLUGS

AC

SPEEDOMETERS

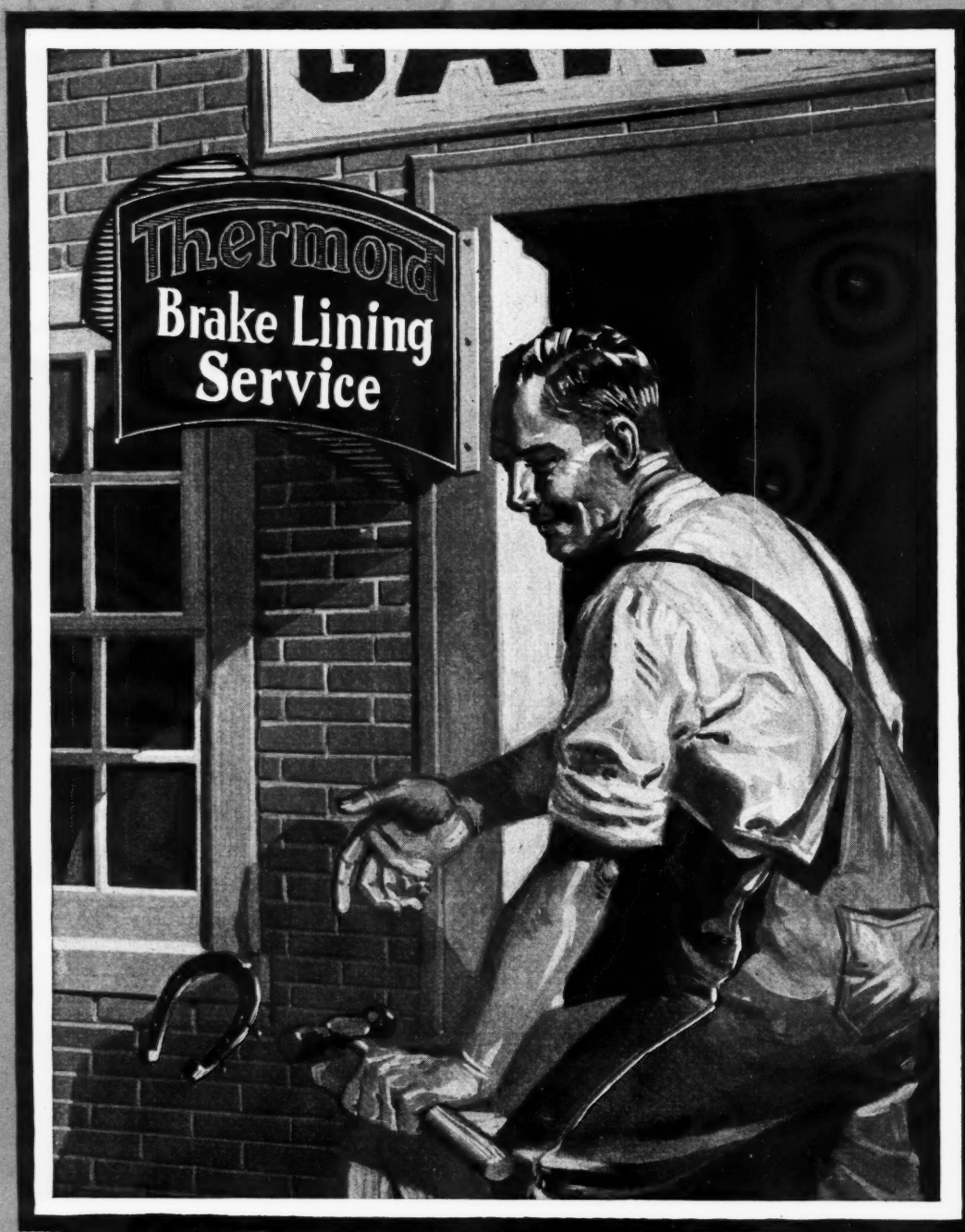
AC

AIR CLEANERS

AC

OIL FILTERS

Hang up a REAL Lucky Charm



Thermoid

The Asbestos Brake Lining



WHEN a go-getter goes over big all the back numbers call it "luck." But the man, who brings home the bacon, knows that horse sense has more to do with it than horse *shoes*.

The wise man in the automotive game doesn't waste his strength battling the current of public opinion. He swims with the tide. He doesn't waste his energy "selling" the little-known and untried line. He gives his customers what they *want*. He knows that volume profits and quick turnover are in the nationally known and dependable product, made and pushed by the reliable manufacturer.

Moral: Whether you sell brake lining to the trade or install it for the public—hitch your wagon to a winner.

It Pays to Stick to Thermoid

From now on it will pay more than ever, because Thermoid is *better* than ever. The new close-set twill weave gives Thermoid new gripping qualities that are unaffected by the driest or the wettest day.

As an *all-weather* lining, the new Thermoid is a wonder. It won't slip—it doesn't swell. Rain or shine, it gives just the proper braking action. Dry pavements, or wet—you can depend on Thermoid for exactly the right behavior. The new Thermoid is perfect for passenger cars and trucks. Wherever extraordinary service is demanded of passenger cars, trucks and buses, you can rely on Thermoid for the dependable job.

Thermoid Radiator Hose

The perfect radiator hose. Specially constructed to withstand the action of oil, anti-freezing solutions, hot and cold water. Thermoid Radiator Hose will not swell during service nor will the plies or the tube separate.

Like Every Thermoid Product—It WEARS

THERMOID RUBBER COMPANY
Factories and Main Offices
TRENTON, N. J.

*Makers of Thermoid and Rexoid Transmission Lining,
Thermoid-Hardy Universal Joints, Thermoid Radiator
Hose and Mechanical Rubber Goods*

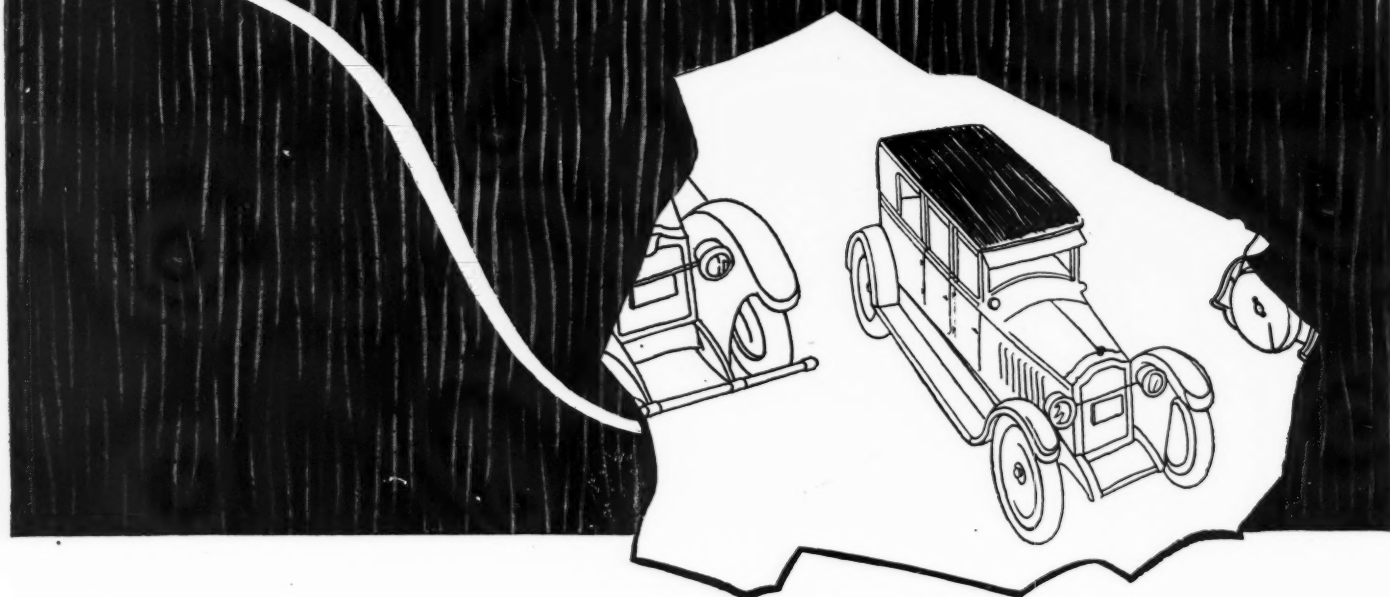
Thermoid-Hardy Universal Disc

If it's service you want make your universal joint replacements with Thermoid-Hardy Discs. The Thermoid-Hardy's patented fan-wise fabric construction outlasts metal. It absorbs jolts and requires no oil or care.

Like Every Thermoid Product—It WEARS

Hydraulic Compressed
Brake Lining
"For short stops and long service"

LONG AWAITED



BUILDERS of quality closed cars have long awaited the coming of a rubber deck material that would combine real economy with lasting service.

Now it has arrived—Du Pont Everbright Pontop—embodying a permanency of finish never before achieved in a rubber top material:

- its superb lustre survives long periods of use and exposure.
- its soft pliability and ease of working make speed production possible on a high quality plane.
- its sponsorship by du Pont makes the completed deck at last a vital sales argument in the marketing of the finished car.

One of your most annoying problems—the rapid dulling of the deck—is now overcome. What was once a weak spot, something to be avoided, can now be used as a sales argument.

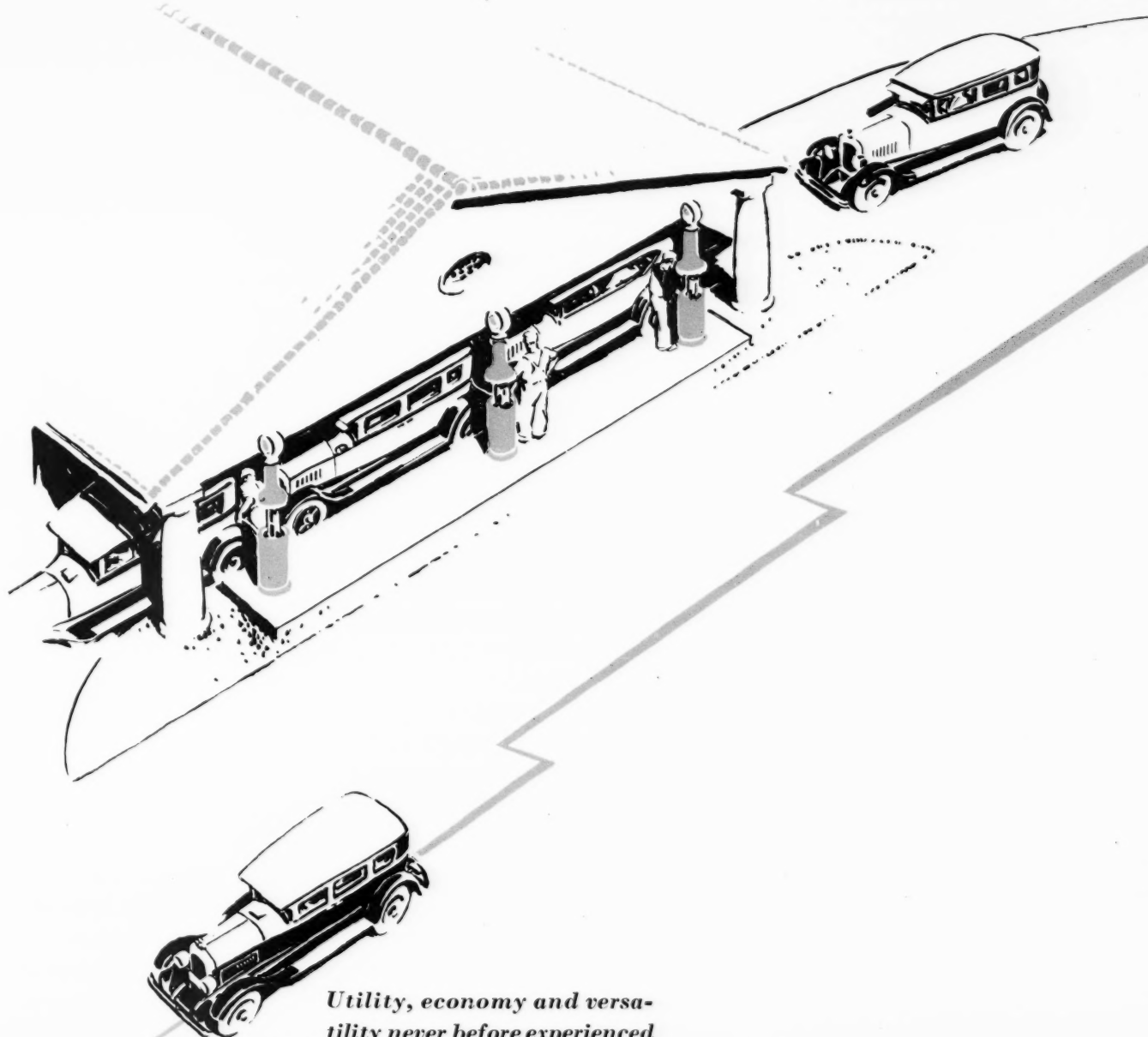
E. I. DU PONT DE NEMOURS & CO., INC., FAIRFIELD, CONN.

DU PONT
EVERBRIGHT
PONTOP

A complete line of quality cars—under one name and one standard of precision manufacture, with a widespread range of price, presents a new and

The little
MARMON

unique dealer opportunity never before available in the history of fine car merchandising.



*Utility, economy and versatility never before experienced
in a fine car*

The little MARMON

It appears that the Little Marmon, which later in the year is to take its place in the Marmon line, will represent the most interesting and advanced piece of engineering news in the motor car industry during 1927.

Its performance has already set the automobile world awirl. Several hundred dealers who have themselves driven it at the factory have gone back home to tell enthusiastic tales of the things it will do.

It can show its tail-lamp to just about anything now on the road.

It will turn in a narrower street than any car of its power and speed.

It will park in a smaller space.

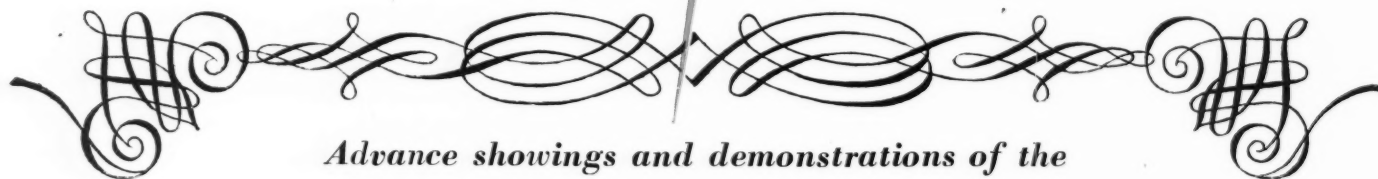
It will slip through traffic lanes that cause most cars to halt.

It gives better than twenty miles per gallon of gasoline

—not just another small car—but an actually great car compacted into smaller dimensions.

Its stamina and dependability are backed by probably the most intensive development that ever went into a new car prior to its introduction to the public

—all under the Marmon name and at a price which insures a responsive and profitable market in even the smallest communities.



*Advance showings and demonstrations of the
Little Marmon are now being held at the
factory ✧ Please write for appointment*

MARMON MOTOR CAR COMPANY

Indianapolis, Indiana

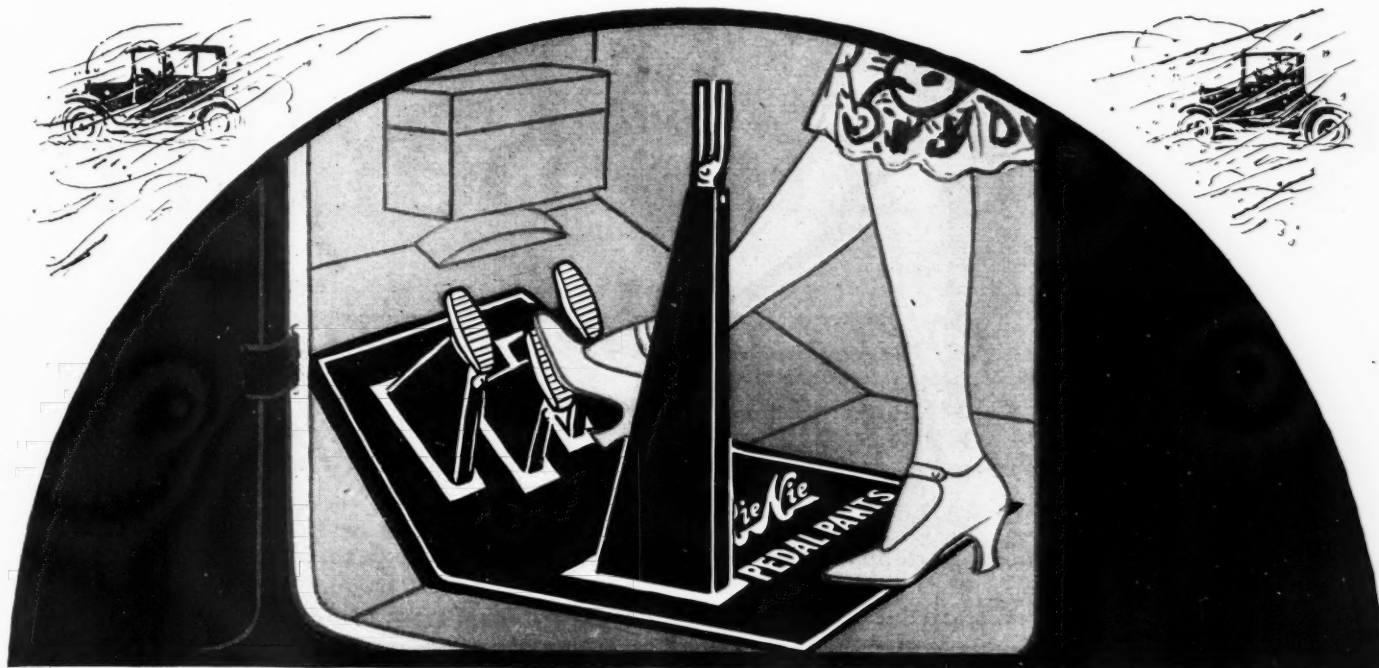
We are interested in seeing the Little Marmon in a private, prior showing at the factory.

Full name _____

Address _____

By _____

City _____ State _____



Rie Nie PEDAL PANTS

Automotive Products

Air Brakes
 All in One Dressing
 Battery Paint
 Bearing Blue
 Blowout Patches of Balloon Tires and
 High Pressure Tires
 Clutch and Brake Compound
 Cowl Ventilator Gaskets
 Enamel (Air Brakes)
 Enamel (Rub On)
 Fan Belts
 Friction Tape
 Gasket Cement
 Gasket Shellac Compound
 Graphite (Flake and Powdered)
 Leather Dressing
 Lucky Star Casing Patch
 Metal and Nickel Polish
 Patches (Repair Kits)
 Pedal Pants
 Polish (Auto Body)
 Radiator Cement
 Red Tip Blowout Patch
 Radiator Hose
 Rubber Cement (Cold Patching)
 Rim Paint
 Rubber Filler and Cement
 Rubber Splicing Compound
 Spring Lubricant
 Tire Mica
 Tire Paint
 Tire Valc
 Valve Grinding Compound
 Varnish (Clear Auto)

For Fords, Oaklands, Overland "4", Chevrolets, Pontiacs, Overland "6", Dodges, Stars, Overland Whippet.

SNAPPY SELLERS

WIDE AWAKE DEALERS are snapping up Rie Nie Pedal Pants in preparation for rapid selling with the first chill wind. When a motorist sees Pedal Pants displayed on your counter or in your window he sees at a glance that *here is the accessory he has been looking for.*

There is a real need for Pedal Pants in your territory and every auto driver wants them. Many of your customers are stuffing newspapers and cotton waste in floor openings around brake and pedals. Sell them Rie Nie Pedal Pants and

Make Money for Yourself!

Considering the tremendous comfort a motorist receives from having his car equipped with Rie Nie Pedal Pants, the price is very low—with a large margin of profit to you.

Ask Your Jobber about Pedal Pants Today!

DURKEE-ATWOOD
MINNEAPOLIS, U.S.A.

Manufacturers of Quality Automotive Products That Sell Since 1910

The facts

which every radio distributor and dealer should know

PROBABLY no word in the entire radio vocabulary has greater commercial importance than the word "Neutrodyne." So let's get started right with a definition.

The word "Neutrodyne" is a registered trade-mark, owned by the Hazeltine Corporation and applied to a radio receiving set embodying certain patented inventions of Professor L. A. Hazeltine, and manufactured exclusively by fourteen licensed manufacturers.

Every genuine Neutrodyne set carries the Neutrodyne trade-mark. Unless it bears this trade-mark, and unless made by one of the fourteen Hazeltine licensees, a receiving set is not a Neutrodyne.

The birth of the Neutrodyne

Back in 1921, when music and speech began to float through the ether in really appreciable quantities, the receiving sets, so-called, were merely crude adaptations of existing radio telegraph apparatus. Without exception they were cumbersome, complicated and unsatisfactory.

Their chief characteristic was their tendency to become transmitters. Upon the slightest provocation, they filled the surrounding air with squeals, howls and hideous sound until the absolute destruction of broadcasting itself was threatened.

This was the situation in 1921 and early in 1922. And then came the change—the change that marked the first real advance—the first radio receiver designed and constructed to receive broadcast.

Professor L. A. Hazeltine, of Stevens Institute of Technology, an electrical genius who has applied his unusual talents particularly to radio, designed and perfected the Neutrodyne receiver which embodies his radio circuit.

This type of amplifier eliminates regeneration by neutralizing the inherent feed back due to undesirable capacity coupling, thereby giving high selectivity, good tone quality and simple adjustment and preventing squeals, whistles and radiation.

This radio receiver when properly constructed and adjusted could not under any circumstances become a transmitter. It could not howl or squeal. It could not radiate.

In addition, this new receiver was found to possess a higher degree of selectivity than had ever before been obtained. It was extremely sensitive and the quality of its reproduction of sound unusually fine.

Small wonder that the Neutrodyne swept the country. Small wonder that it was widely imitated. Small wonder that all kinds of sets were sold as "neutrodynes."

Organization of the Hazeltine interests

Following the granting of patents to Professor Hazeltine—patents which have successfully stood the test of litigation—the Hazeltine Corporation was formed. This company now owns and controls these patents and inventions, and the Neutrodyne trade-mark.

It manufactures no receiving sets, but has granted

Look for this trade-mark



It is your protection against patent infringement liability

HAZELTINE CORPORATION

(Sole owner of "Neutrodyne" patents and trade-marks)

INDEPENDENT RADIO MANUFACTURERS, INCORPORATED

(Exclusive licensee of Hazeltine Corporation)

The next advertisement in this series will explain the service rendered the radio business by the Hazeltine Corporation

about Neutrodyne

an exclusive license to the Independent Radio Manufacturers, Incorporated, which in turn has licensed its fourteen member companies to manufacture Neutrodyne receivers.

The Independent Radio Manufacturers, Incorporated

The fourteen companies, who alone are permitted to use the Hazeltine inventions and to label their receiving sets with the Neutrodyne trade-mark, are these:

THE AMRAD CORPORATION, Medford Hillside, Mass.
 F. A. D. ANDREA, Inc., New York City
 CARLOYD ELECTRIC & RADIO COMPANY, Newark, N. J.
 FREED-EISEMANN RADIO CORPORATION, Brooklyn, N. Y.
 EAGLE RADIO COMPANY, Newark, N. J.
 GAROD CORPORATION, Belleville, N. J.
 GILFILLAN RADIO CORPORATION, Los Angeles, Cal.
 HOWARD RADIO COMPANY, Inc., Chicago, Ill.
 KING-HINNERS RADIO COMPANY, Buffalo, N. Y.
 WM. J. MURDOCK COMPANY, Chelsea, Mass.
 STROMBERG-CARLSON TELEPHONE MFG. CO., Rochester, N. Y.
 R. E. THOMPSON MFG. CO., Jersey City, N. J.
 WARE RADIO CORPORATION, New York City
 THE WORK-RITE MFG. CO., Cleveland, Ohio

How the companies operate

These fourteen manufacturers pay royalties to the Independent Radio Manufacturers, Incorporated, which company turns over this income to the Hazeltine Corporation, less a fixed charge which is set aside to accumulate into a fund. This fund provides the means for prosecuting infringements of "Neutrodyne" patents and trade-marks, whether by manufacturers, wholesalers, retailers or even by the ultimate purchasers of radio receivers. This fund also provides for the defense of distributors and dealers authorized to handle and sell licensed Neutrodyne radio receivers against patent infringement prosecution as far as those receivers are concerned.

Complete protection for Neutrodyne distributors

The value of this arrangement for the protection of the manufacturers, distributors, retailers and

users of Neutrodyne apparatus has already been demonstrated.

"Neutrodyne" distributors when sued have been successfully defended in the courts by the Independent Radio Manufacturers, Incorporated. And the validity of "Neutrodyne" patents and inventions has been upheld by the courts against infringers.

So that today no radio receiving sets or radio apparatus offers the distributor and the dealer a greater degree of safety than Neutrodyne.

It has won its battles in the law courts, just as it has won the hearts of the radio listeners. And it is financially able and more than willing to protect itself and its distributors. Neutrodyne will not only defend itself when attacked—it will lead the attack if its rights are invaded.

Play safe with Neutrodyne

Remembering that distributors, wholesalers, retailers and even consumers are liable under the law, in selling or having in their possession infringing radio apparatus, read the following paragraphs carefully:

The courts have recently ruled that Tuned Radio Frequency Receivers equipped with adjustable means to usefully control regeneration and prevent oscillation, infringe the Armstrong patents.

The courts have also held that receivers employing certain neutralizing schemes infringe the "Neutrodyne" patents.

Ask yourself whether the sets you handle are clear of liability; whether the manufacturers of such sets would be likely to protect you if you were sued.

If you are in doubt about your liability, consult competent legal authority.

Thoughtful, careful, conscientious distributors are today playing safe by handling licensed Neutrodyne apparatus. They have not only found such a policy safe and sound, but highly profitable.

Look for this trade-mark



It is your protection against patent infringement liability

HAZELTINE CORPORATION

(Sole owner of "Neutrodyne" patents and trade-marks)

INDEPENDENT RADIO MANUFACTURERS, INCORPORATED

(Exclusive licensee of Hazeltine Corporation)

Keep this important statement and file it for your future reference and guidance

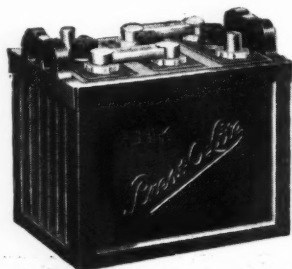
Prest-O-Lite merchandising plan helps this company to bigger business



Prest-O-Lite

HERE'S another piece of evidence to show that Prest-O-Lite is one of the most powerful business builders. Read this letter from Polson & Hite, of Blackwell, Okla.:

"We have been in the battery business in Blackwell for the past five years, but we never have shown the increase we should until we tried your new merchandising plan. We are for it 100 per cent."



Prest-O-Lite does increase business, and profits too. The battery is as fine a battery as can be made. It is

priced right. It is nationally advertised and the merchandising plan back of it has proved to be absolutely sound in every respect.

And remember, in addition to the motor-car there is the radio business. Here are exceptionally fine opportunities for added profits. Prest-O-Lite "A" and "B" Storage Batteries made especially for radio are always in great demand.

Write us today for our interesting plan and for our service station proposition.

THE PREST-O-LITE CO., INC.
INDIANAPOLIS, IND.

New York

San Francisco

In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto, Ontario



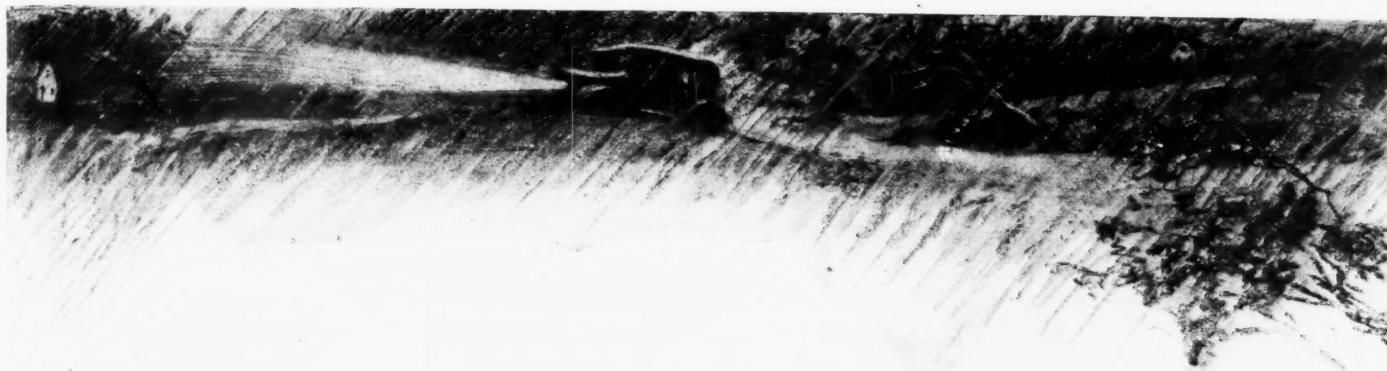
VULCO TIRES

"Built for Miles"

A ready-made market—because more than 10 million motorists are now using Vulco products and know from experience that the name Vulco means extra quality and service. That's why the Vulco Tire has found a waiting market and is making such a record in sales.



GENERAL



A Fisher Body for everybody

PRODUCTS OF GENERAL MOTORS

"A car for every purse
and purpose"

CHEVROLET
PONTIAC
OLDSMOBILE
OAKLAND
BUICK
CADILLAC
GMC TRUCKS
YELLOW CABS,
BUSES AND TRUCKS

FRIGIDAIRE
Electric Refrigerators
DELCO-LIGHT
ELECTRIC PLANTS

Fisher Bodies • Delco and Remy
Electrical Equipment • Harrison
Radiators • Jacox Steering Gears
AC Spark Plugs • AC Speedometers
• New Departure Ball Bearings
Jaxon Rims • Brown-Lipe-Chapin
Differentials and Bevel Drive Gears
Hyatt Roller Bearings • Inland
Steering Wheels • Klaxon Horns.

General Motors passenger cars,
Delco-Light electric plants and
Frigidaire electric refrigerators
may be purchased on the GMAC
Time Payment Plan.

THE lamps, the windshield and the top were "extra" when the first cars were sold. Nobody thought of driving except on sunny days.

But Fisher Bodies conquered storm and cold—just as Delco had conquered the night and made starting easy—and the car became a universal servant.

It was in 1910 that Cadillac placed the first big order with Fisher for closed bodies, 150 of them, an overwhelming contract for that time.

Today Fisher is building

1,500,000 closed bodies a year, utilizing all the resources of volume production to enhance quality and lower costs, and keeping alive throughout its whole organization an active striving for constant improvement.

Fisher Body is a member of the General Motors family. A Fisher plant is an integral part of every General Motors car division. This means utmost economy. It enables General Motors to make quality closed cars for every purse and purpose, *all* with Fisher Bodies.

© G.M.C. 1926

MOTORS

SPECIAL!

To You DEALERS

Who Demand a Quick
"Get-away" on Sales
and Profits



STROMBERG SPECIAL CARBURETORS

offer you the most attractive opportunity for sales and profits.

They're the only carburetors built special for each make of car and therefore assure best results under every condition.

Having established World's records on many makes of cars you can absolutely guarantee to your customers that the Stromberg will give them easier starting in all weathers—faster pick-up, more power, greater speed, smoother running at *all* speeds and *many more miles per gallon*.

Get all the facts about these wonderful carburetors, as well as about the full line of Stromberg Automobile Necessities, our sales helps and national advertising campaign. Write today.



STROMBERG SUPER SHOCK ABSORBERS

Give greatest comfort because they regulate spring action to the correct degree. For balloon or Standard Tires. Working parts protected against dirt, water and oil. Steel cable will not rust, stretch or break. No adjustments—no oiling or greasing. Made to measure for each make of car. Your trade will want them once they know them.

STROMBERG ELECTRIC WINDSHIELD WIPER



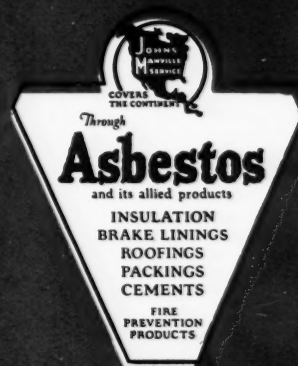
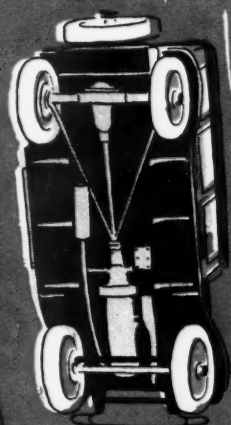
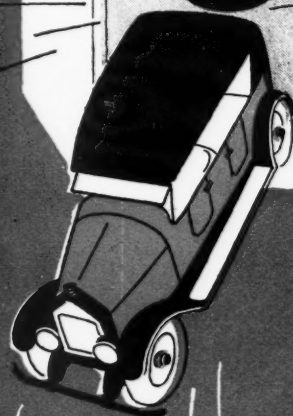
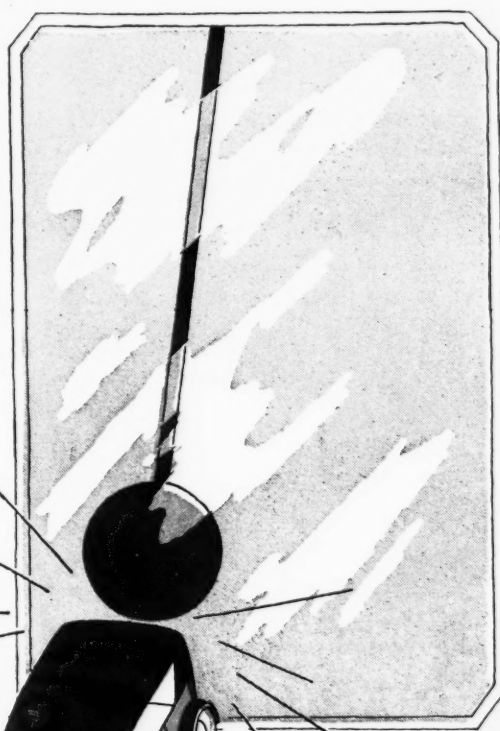
Your customers cannot know the satisfaction and feeling of safety while driving in rain, fog, sleet, snow, until they have one of these perfect vision wipers on their cars. Two speeds. Adjustable pressure on glass. Unusually economical on battery current. Operates perfectly under all driving conditions. Dependable always.

• STROMBERG MOTOR DEVICES CO.
58-68 East 25th St., Chicago

Direct Factory Branches: 517 W. 57th St., New York City, N. Y.; 760 Commonwealth Ave., Boston, Mass.; 34-86 Hancock Ave., W., Detroit, Mich.; 1529 Laurel Ave., Minneapolis, Minn.; 1809 McGee St., Kansas City, Mo.; London, England, Milman's St. & Cheyne Walk.

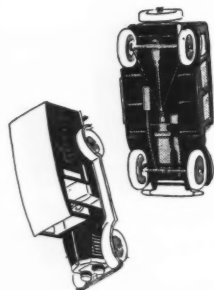
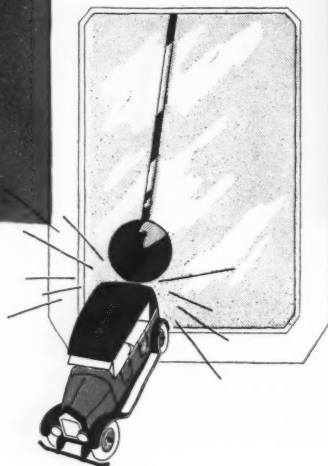
(B-29)

STROMBERG AUTOMOTIVE NECESSITIES



*Every time
the clock ticks
there are three
brake lining jobs*

Are you getting
your share?
The next page
tells you how



Worth remembering

When motorists think of brake lining they naturally think of Asbestos.

When they think of Asbestos they think of Johns-Manville.

Tie up to the asbestos advertising of Johns-Manville with the sign above. Ask your Distributors' Salesman.

Every time
the clock ticks
there are three
brake lining jobs

How to get your share of this business

ALMOST every brake specialist who stands smiling behind his cash register to-day was saying five years ago, "Re-lining brakes! No! We can't bother with that."

To-day he works behind a "Brake Service" sign. Why? Because for every new car that is put on the road, there are now six brake lining jobs on old ones! Quick, clean, honest profit!

And it's anybody's business too. The man who goes after it gets it.

That Johns-Manville has realized this for some years is evidenced by the clean-cut merchandising help that we offer to dealers who stock our brake lining. Dealers and garagemen who have taken full advantage of our set-up are now "brake specialists." They know *it pays*. And believe us *it does pay*. You'll never know it, however, until you try.

The first step you should take is to let your trade know you are identified with Johns-Manville and backed by its reputation. That means get our "Brake Service" sign up in a conspicuous place on your shop.

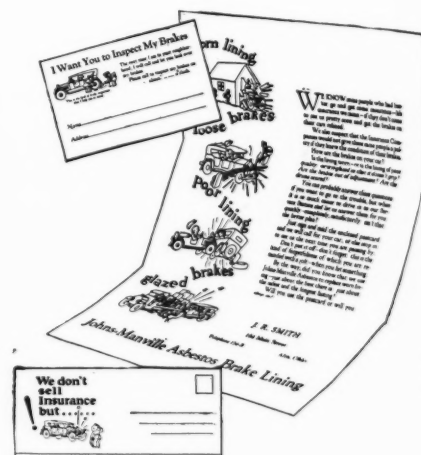
Then ask the nearest Johns-Manville Distributor about our new and complete set of selling helps. An example is shown on the right.

JOHNS-MANVILLE Inc.

292 Madison Avenue, at 41st Street, New York City

Branches in all large cities

For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto



Here's real help!

—a mailing piece to go to individual car or truck owners. Your own imprint appears on this mailing folder as though you yourself had produced it and the return post card is addressed to you. This is only one of our helps. There are many more. Ask your Distributors' Salesman.

Printed in U. S. A.

JOHNS-MANVILLE

ASBESTOS BRAKE LINING CLUTCH FACINGS PACKINGS, Etc



Why Pay More for Less?

You wouldn't expect to buy a speedy, accurate, dependable Cylinder Hone for less than \$35. But why pay more and get less than—

THE NEW MODEL X



An even speedier, more accurate tool than previous models. Precision made to produce precision work. Absolutely rigid, perfectly parallel.

Impossible to hone out of round or out of parallel. Pressure can be increased or diminished with a turn of the wrist without removing Hone from the cylinder or drill from the Hone.

No need to remove the motor from the chassis. Any ordinary garage mechanic can finish a cylinder within one-half thousandth quickly and easily. And with the Hall Model X the operator can tell from the "feel" or the sound of the drill speed when the cylinder is finished within a half thousandth.



Ask Your Jobber

Increase your profits with this speedy tool. Get the regrinder's profit from labor, pistons, pins and rings for yourself. Ask your Jobber or write direct to us for folder just off the press, being sure to give your Jobber's name.

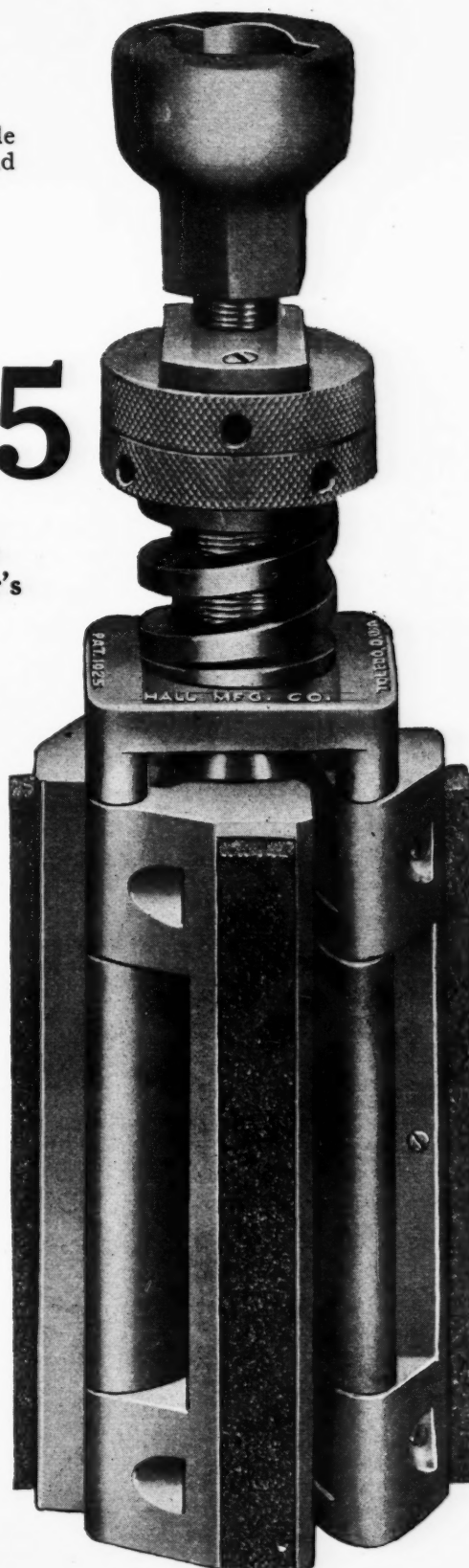
THE HALL MFG. COMPANY
1610 Woodland Ave. Toledo, Ohio

In Canada: Hall Gear & Machine Co., Ltd., Toronto Ont.

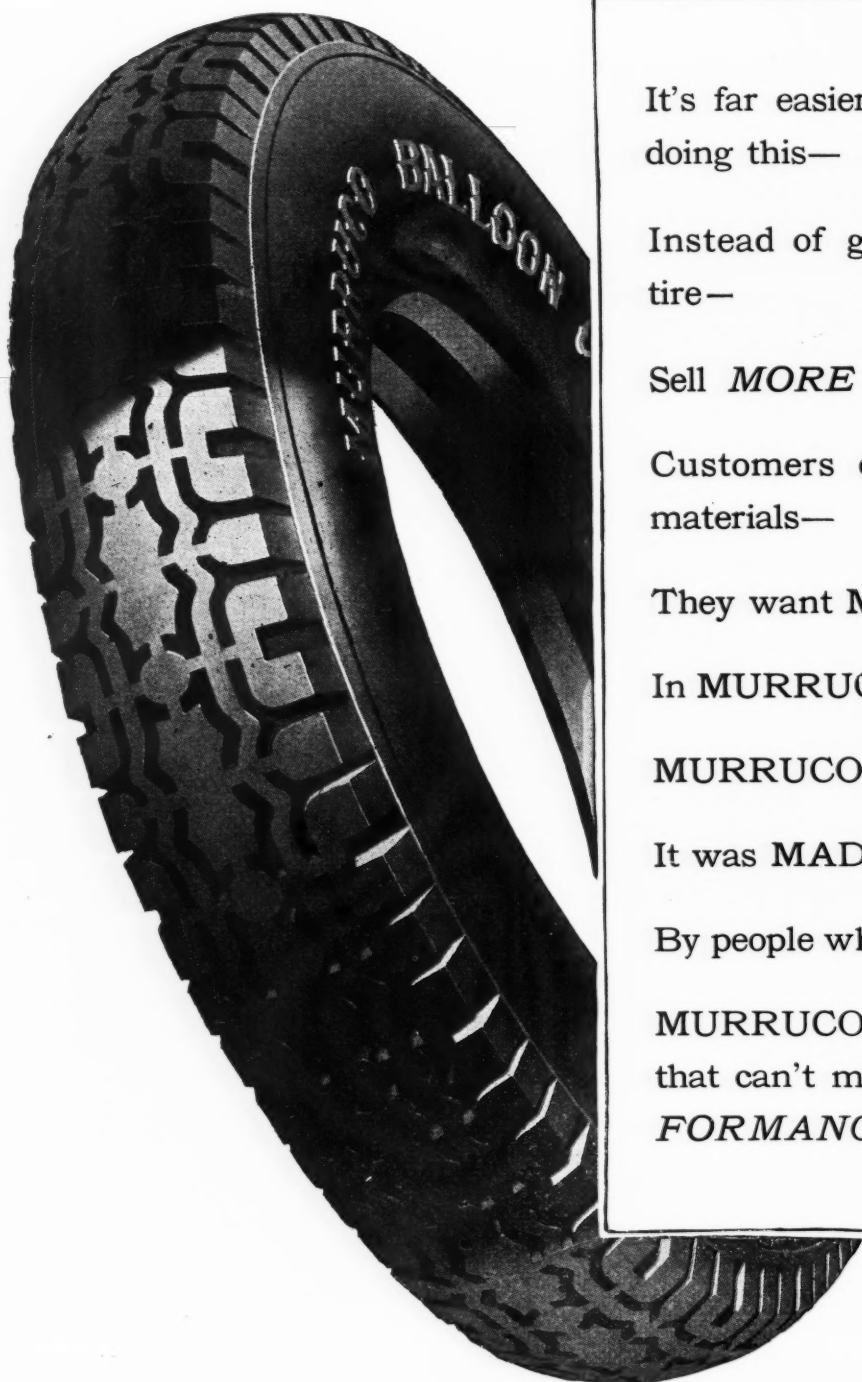
Foreign Representatives: England—Isaac J. Burgess, London; Australia—Sidney Airen, Sydney; Brazil—M. B. Astrada; Rio De Janeiro; Argentine—Otto Eberson, Buenos Aires; Austria—Justus Vormann, Wien; Germany—Emil Bollingham, Wiesbaden; France—Fenwick Freres & Co., Paris; Mexico—Auto Supply Company, Mexico City; Norway—Cornliussen & Stakgold, Oslo.

\$35

at
your
Jobber's



More Profit for YOU



It's far easier to make more money by doing this—

Instead of getting more money for a tire—

Sell *MORE TIRE* for the money—

Customers don't pay for names—or materials—

They want *MILEAGE*—

In *MURRUCO CORDS*—they *GET* it—

MURRUCO delivers mileage *PLUS*—

It was *MADE* to do it—

By people who *KNOW HOW* to do it—

MURRUCO meets others on *PRICE* that can't meet *MURRUCO* on *PERFORMANCE*.

MURRAY RUBBER COMPANY, Trenton, N. J.

—THIS Way

MURRUCO CORDS

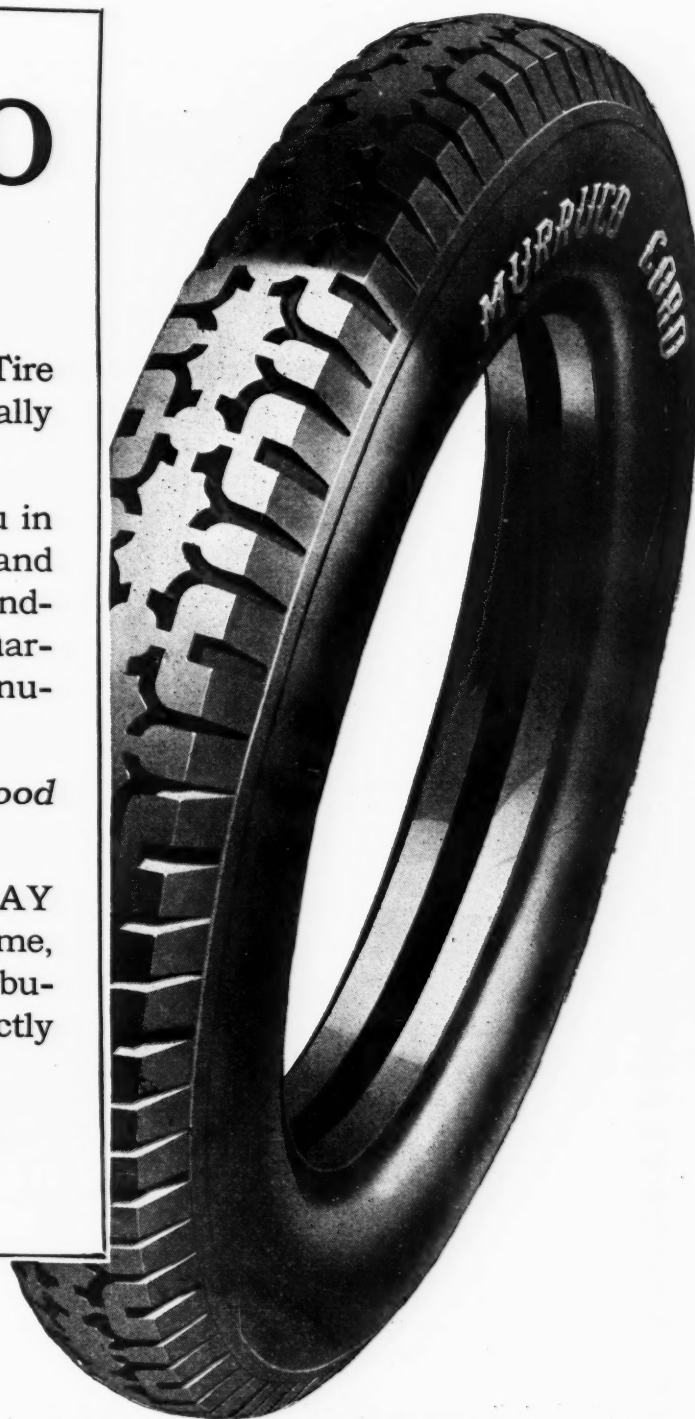
Satisfy the demand for a **QUALITY** Tire at a **LOWER** initial cost and unusually **LOWER** cost per mile.

MURRUCO CORDS are offered you in a complete line of High Pressures and Balloons; full oversized; full ply; standard construction; raised flat tread; guaranteed fully in accordance with manufacturers' standard warranty.

You know—MURRUCO has to be *good* to be sponsored by MURRAY.

MURRUCO upholds the MURRAY name for **QUALITY**—at the same time, our volume production and low distribution cost enable us to sell it at a strictly *competitive price*.

*Write today for full details of MURRUCO
and the MURRAY Franchise.*



MURRAY RUBBER COMPANY, Trenton, N. J.

BADGER

TIRE and TUBE REPAIR OUTFITS

A most complete and profitable line for the Automotive, Accessories and Repair trade.

Made by one of the largest companies in the Rubber industry, and quality guaranteed.

Every car owner a possible customer for one or more of these items.

Dealers supplied through the Wholesale trade.

For full information, write

THE BADGER RUBBER WORKS
MILWAUKEE, WISCONSIN



BADGER
Tire and Tube Repair Kit



BADGER
Tube Quick Repair Kit
Standard and Junior Sizes



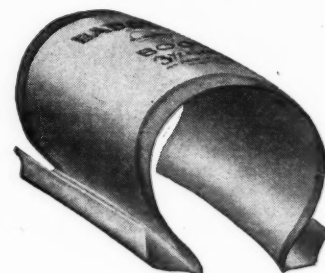
BADGER
All Cord—Gum Coated
Tire Plaster—4" and 6"
Counter Display



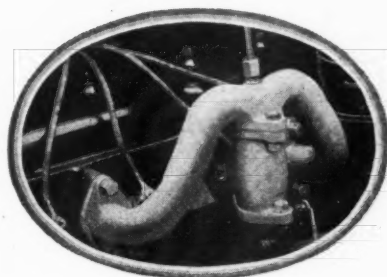
BADGER
Air-Drying
Solvent Repair Cement



BADGER
Tube Repair Kit
Shop Size



BADGER
Fabric Blowout Boot



"BAT" Suction Super-Charger
Installation on Chevrolet

"We have the Highest Praise for your product"

"—and there is no question that we can put it over."



That is what a leading member of the trade in New York City has to say about the "BAT" Suction Super-Charger—and it is of particular interest to you because **you** are a member of the trade, and there is no question that **you** can put it over.

The "BAT" Suction Super-Charger

"Functions When the Engine Breathes"

There is a tremendous demand for "BAT" Suction Super-Chargers. Production has practically doubled every month for the last half year—and the demand has never yet been entirely served.

Dealer orders are coming fast. Re-orders are following up sale of first shipments. The "BAT" is moving—and moving pays.



Drop us a line and let us tell you the details. Ask for the illustrated booklet: "Supercharging." It is the most important automotive subject of the day.

P. H. WEBBER COMPANY

Racine Industrial Plant Building No. 12

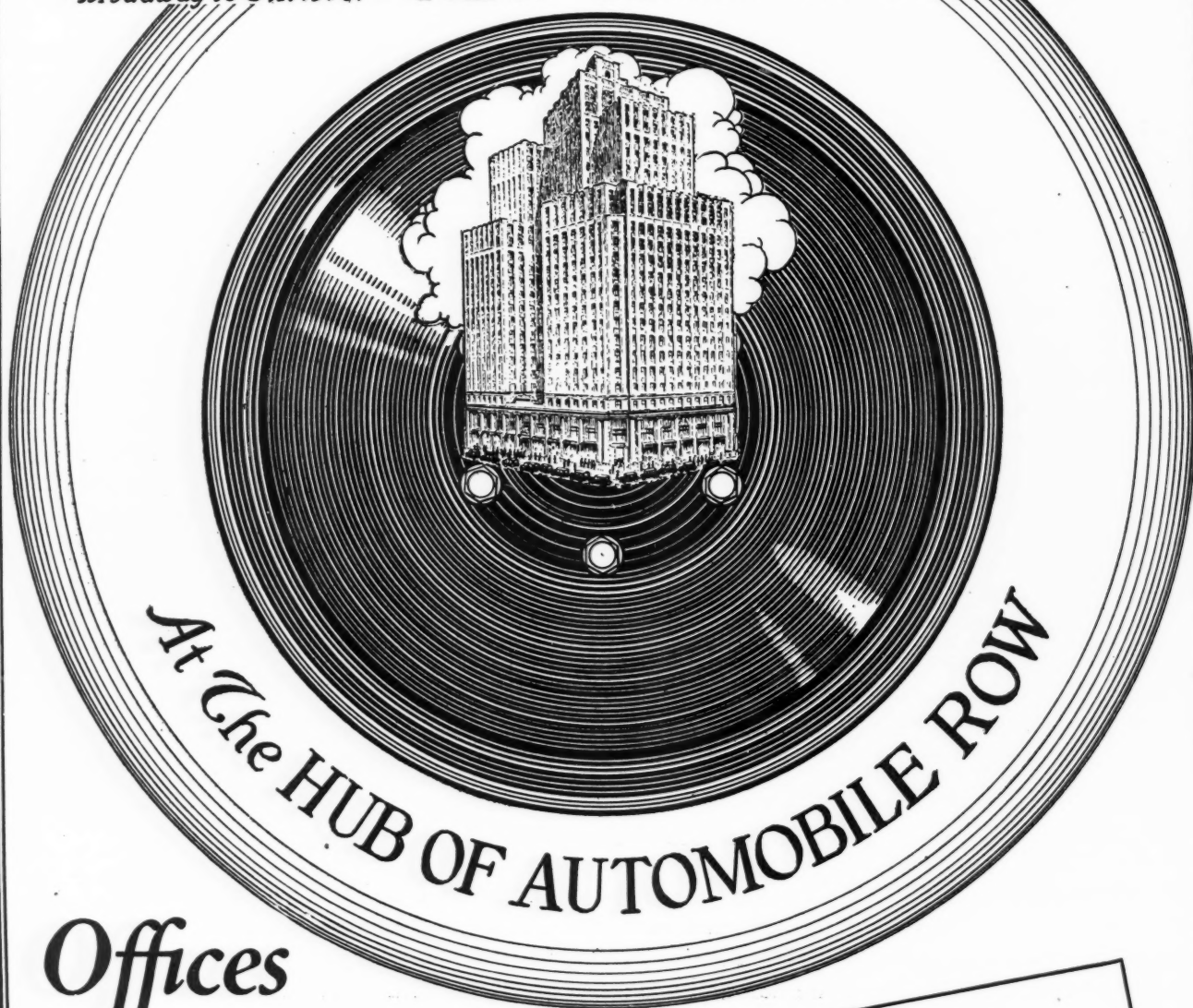
Racine

Wisconsin

MANUFACTURED AND SOLD UNDER THE LICENSE OF P. J. F. BATENBURG, RACINE, WIS.

GENERAL MOTORS BUILDING

Broadway to 8th Ave. ~ NEW YORK ~ 57th to 58th Street



Offices

THE forecast for 1927 in the automotive field shows that America's most important automotive interests will maintain their office headquarters or Eastern branch offices in this magnificent new 25 story office building. It is the most central and accessible location in New York, highly modern, exceptional in light and layout.

Space available in units of 450 Sq. Ft. up to floors of 20,000 Sq. Ft. Ready in April, now leasing from plans.

For renting information apply to

**CUSHMAN &
WAKEFIELD, INC.**

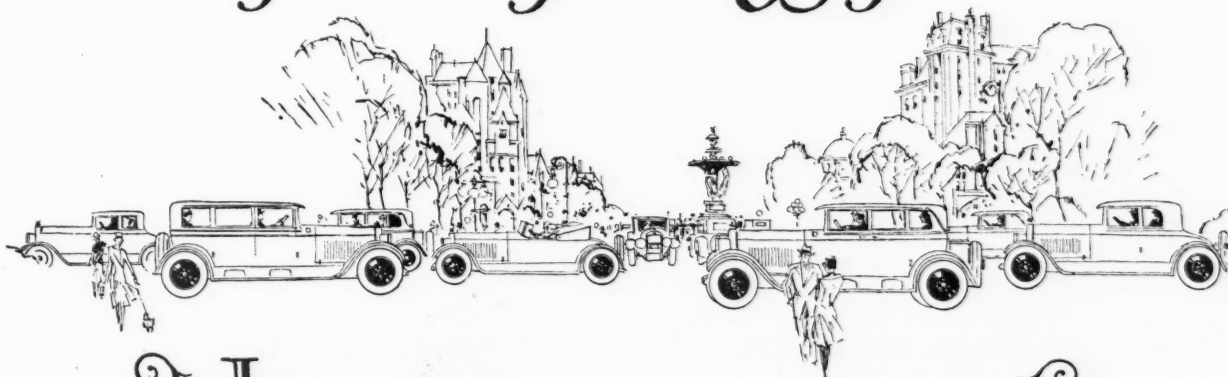
Renting and Managing Agent

50 East 42nd Street

New York City

*Your Eastern
Office should
be here at the
Axis of automotive
interests in
New York. KA*

Why Mr. NASH said... "Goodbye, buggy wheels"



IT ALL STARTED when Mr. Nash's engineering staff told him that their experiments had shown Budd-Michelin Wheels to be better.

But changing to steel wheels was a radical step. Mr. Nash didn't know how the public would take to them.

So he decided on a test. Beginning in May, 1922, he offered Budd-Michelin Wheels as optional equipment on the Nash. He charged \$25 extra for them. That was a test. Here's what happened:

Nash buyers took 27,505 Budd-Michelin Wheels during the remainder of 1922—at \$25 extra for every set.

In 1923, Nash buyers took 149,237 Budd-Michelin Wheels—six times as many—adding \$25 to the cost of each car.

In July, 1924, Mr. Nash did a little figuring. He checked back and found

that since Budd-Michelin Wheels were first offered, 75% of his customers—3 out of every 4—had selected them, and paid \$25 extra.

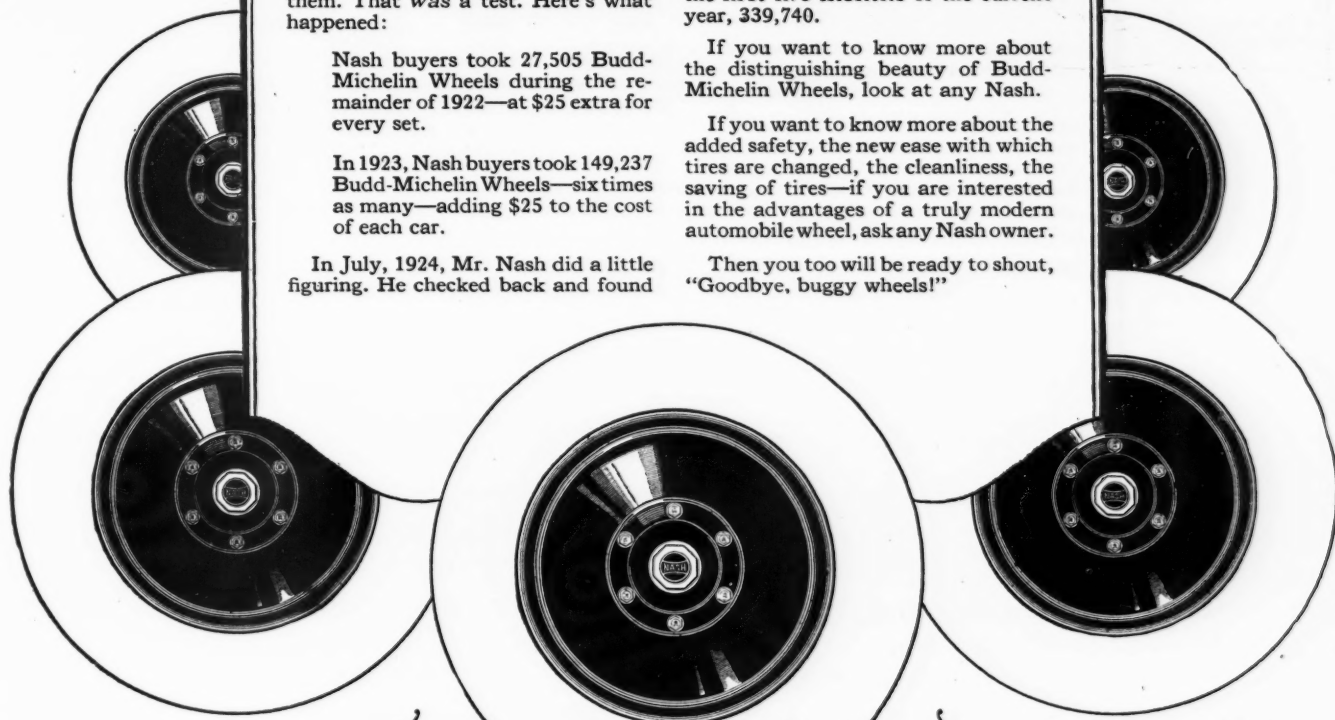
That settled it. Automobile buyers, as well as Mr. Nash, were ready to say, "Goodbye, buggy wheels." So Budd-Michelin Wheels became standard on the Nash, with no extra charge.

In 1925 Nash buyers took 508,404 Budd-Michelin Wheels, and during the first five months of the current year, 339,740.

If you want to know more about the distinguishing beauty of Budd-Michelin Wheels, look at any Nash.

If you want to know more about the added safety, the new ease with which tires are changed, the cleanliness, the saving of tires—if you are interested in the advantages of a truly modern automobile wheel, ask any Nash owner.

Then you too will be ready to shout, "Goodbye, buggy wheels!"

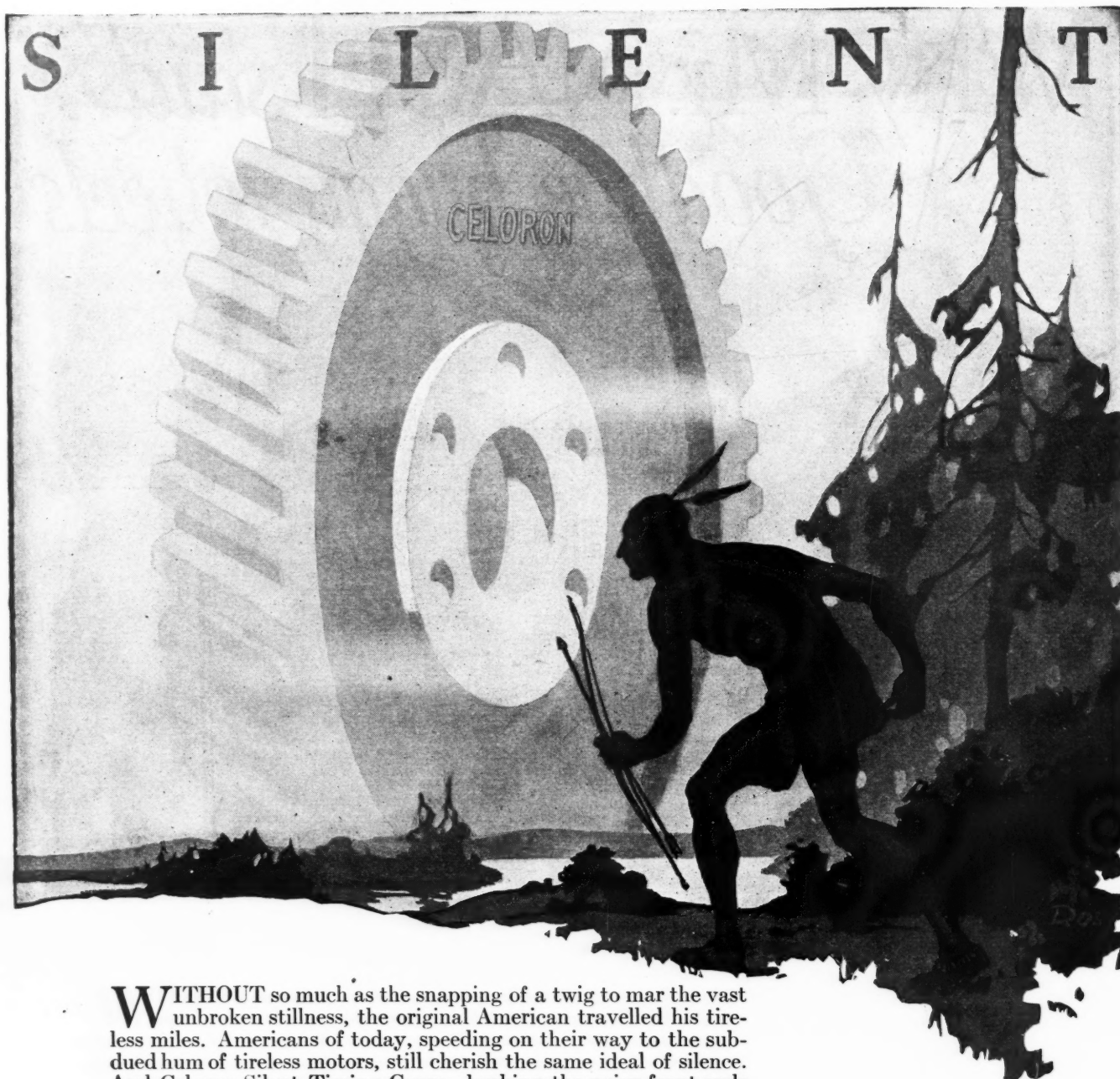


Detroit

BUDD
WHEEL COMPANY

Philadelphia

Also makers of Budd Interchangeable Wire Wheels, which fit the same hub as Budd-Michelin All-Steel Wheels.



WITHOUT so much as the snapping of a twig to mar the vast unbroken stillness, the original American travelled his tireless miles. Americans of today, speeding on their way to the subdued hum of tireless motors, still cherish the same ideal of silence. And Celoron Silent Timing Gears—hushing the noisy front-ends of millions of motors—are contributing their share toward the realization of that ideal.

By eliminating the grinding contact of metal against metal, interposing their own tough durability, Celoron Timing Gears offer something more than the mere luxury of silence. They are *minimizing wear* in the timing mechanism. They are *preserving* that *perfect timing* that prolongs the life of the motor itself.

To the repair man, Celoron Timing Gears present many definite profit-bearing features. Their dependability creates business building customer goodwill. Their uniform accuracy saves valuable installation time and labor. Their ready availability through N.A.P.A. distributors and jobbers everywhere, speeds prompt, sure deliveries.

DIAMOND STATE FIBRE COMPANY

BRIDGEPORT, PA.

Paris, France

London, England

CHICAGO, ILL.

Diamond State Fibre Co. of Canada, Ltd., Toronto, Canada

CELORON TIMING GEARS

Celoron Timing Gears Have These Distinct Advantages

1. Non-metallic; Eliminate metal-to-metal contact
2. Silent at all speeds
3. Stay silent permanently
4. Resilient; Save every part of the timing mechanism from the effects of vibration and shock
5. Prolong the life of shaft bearings
6. Accurately cut, they keep timing accurate
7. Maintain gas and oil economy
8. Prevent tear-downs
9. Grease-proof, oil-proof, water-proof
10. Will not warp or swell

When at the Sesqui-Centennial, visit our Bridgeport, Pa., factory. Let us show you how Celoron and Diamond Fibre are manufactured.

Announcing

Cork-Sealed Piston Rings

**A Product of Four Years
of Experiment, Test and Service**

Cork-Sealed is a new piston ring—to the trade.

In reality, it is tried and tested, and sufficiently successful to be used for replacement in thousands, by factory branches of some of the leading car manufacturers.

It is built on the principle of a *packing ring*; which prevents wear, loss of power, blow-by and piston slap.

Advance information is ready now. Write us. Or watch for our page advertisement in next week's issue of Motor Age.

The Cork-Sealed Piston Ring Corporation

2332 Michigan Ave., Chicago

Factory: Denver, Colo.

***Canadian Distributor: Purser, Bull & Co., Ltd.
Toronto, Canada***



Get This FREE Booklet!

Tells How To
Increase Your
Winter Profits

CHROMINE Is Going Big!

GOOD news travels fast. If you don't know about Chromine, you should. If you have never sold a freeze-proof, it is time you did—and the one that you can handle with the most profit, least risk, and the most satisfaction to your Customers,—is **CHROMINE**—The Super Radiator Freeze-Proof.

Can be stored in any quantity without fire hazard.

The growing popularity of Chromine is visible evidence of the fact that

*Sold from Drum
to Radiator*

motorists are demanding a freeze-proof that does not evaporate.

Judging from the orders already booked from live Dealers and Jobbers, Chromine is on its way to its biggest Season.

Get your copy of the **CHROMINE BOOKLET** and read the evidence—why you should order from your Jobber now.

Chromine will not evaporate

Chromine
REG. TRADE MARK
RADIATOR
FREEZE-PROOF SOLUTION

PYRENE MANUFACTURING CO., Newark, N. J.
Makers of Pyrene Fire Extinguishers and **OFF'N'ON** Tire Chains

arrived!

THE Sandar — the new cone Speaker — has *arrived*.

Sandar covers the whole range, it brings out each sound within the scope of the set, unblemished, unaltered, and with full value all along the scale.

Sandar is artistically designed, it appeals to those to whom attractive appearance is as essential as mechanical excellence, AND

Sandar is priced lower than any other licensed speaker of its size on the market, it

retails at \$27.50! A remarkably low price for a quality product — a price that is sure to *move Sandars fast*.

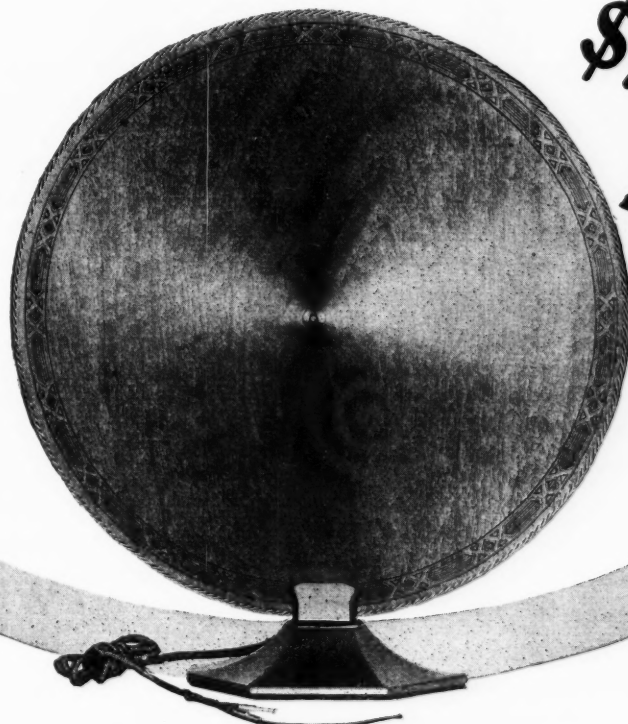
Look into the merits of the Sandar Speaker. Sandar is going to register strongly with those who are always in the market for refinements in radio reception.

A forceful, comprehensive advertising campaign is planned to back up and supplement all sales effort on Sandar. Write us for terms and full information.

SANDAR CORPORATION

Crescent Plaza Building, Long Island City, N. Y.

*Licensed under
Lektophone Patents*



\$27.50

SANDAR S P E A K E R



The men who drive these roads are logical prospects for

They are the men to sell!

Out in the towns of 10,000 and less, where 60% of tire chain sales are made, is the place to have WESCO Tire Chains always in stock.

Talk to your customers when they come in. Get those who have no tire chains to invest in WESCO. Sell WESCO to those whose present chains need replacement before Fall and Winter storms.

There's prospective WESCO business wherever cars are owned. *Get it for yourself!*



We have a plan of merchandising that will appeal to you. It enables us to serve you in a manner that not only better satisfies your customers but obtains a quicker turn-over on WESCO Chains at a liberal margin of profit.

Ask your nearest hardware jobber or write us direct.

To help you sell WESCO Tire Chains, they are packed in attractive two-colored cartons that make a beautiful display in your window, on the counter or on the shelf. Make use of that carton. Let it make more sales. It does in thousands of show rooms every year.

Making WESCO Tire Chains easy to buy has made them easy to sell—and a small stock is ample to meet practically all requirements. *Try WESCO turn-over. It pays!*

**WESTERN CHAIN
COMPANY**

Chicago,

U. S. A.

WESCO TIRE CHAINS

ZENITH

Package Profits are Clean Profits with the

ZENITH

CARBURETOR

Completely equipped, tested and with proper setting—now available for quick and easy installment of 86% of *all registered cars*. Each outfit comes carefully packed in an individual box with full installation instructions.

Auburn	\$18.50	Maxwell	\$16.50
Cadillac 51-57	45.00	Moon	18.50
Cadillac 59-61	75.00	Oakland 6-54	17.50
Chevrolet 490	15.00	Oldsmobile 1923-5	15.00
Chevrolet K	15.00	Oldsmobile 1926	19.00
Chrysler 4	16.50	Overland 4	16.00
Chrysler 6	32.50	Overland 6	15.50
Cleveland	18.25	Packard 116-126	45.00
Columbia	18.50	Packard Truck	50.00
Davis	18.50	Reo 6	23.50
Dodge	20.00	Reo Speed Wagon	16.50
Durant A-22	15.00	Star	16.50
Essex 6	24.00	Studebaker Light 6	15.00
Elcar	18.50	Studebaker Standard 6	16.00
Flint 40	16.50	Studebaker Special 6	28.50
Ford	12.50	Studebaker Big 6	30.55
Gardner 4	15.00	White G O & G N	27.50
Gray	16.00	White G K	27.50
Hudson	24.00	White G E C	31.50
Hudson Dual	60.00	White G M	29.50
Hupmobile R	15.00	White G A	29.00
Mack A B	37.50	Willys-Knight 4	20.50
Mack A C	40.00	Willys-Knight 6	23.00

Prices subject to change without notice.

Accessory dealers and garages are finding these Zenith "package outfits" a sure source of profit—a clean profit from satisfied customers. Each outfit is designed and built special for the particular make of car. You are giving your customer Zenith proven quality and performance at a price made possible only by the car owner's demand for good carburetion—Zenith carburetion. *There is a Zenith carburetor for every make of car or truck.* Are you overlooking your opportunity?

Write to-day for Dealer's Proposition.

ZENITH-DETROIT CORPORATION

Branches:
NEW YORK
CLEVELAND
CHICAGO

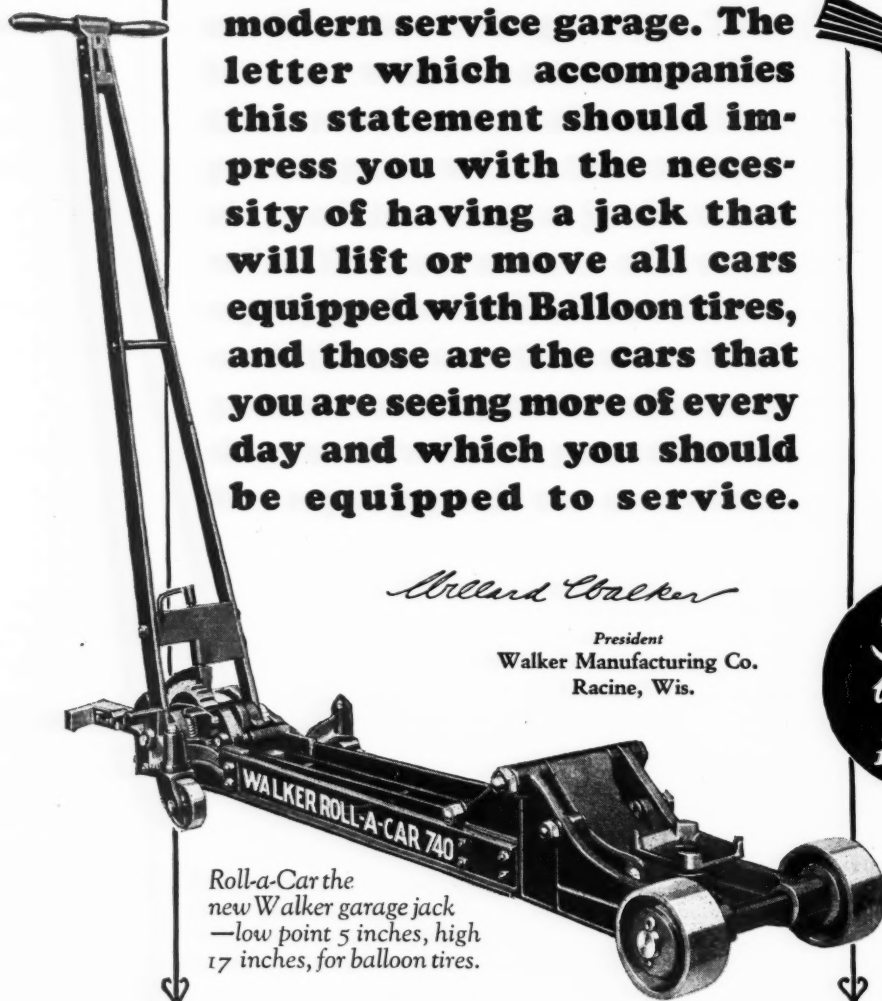
Manufacturer of
ZENITH CARBURETORS
Over 1200 Service Stations

MAIN OFFICE
and FACTORY
DETROIT
MICHIGAN

The constant increase in the purchase and use of No. 740 Walker Roll-A-Cars is the best demonstration of the fact that the features incorporated in this Jack are those which meet the needs and requirements of the modern service garage. The letter which accompanies this statement should impress you with the necessity of having a jack that will lift or move all cars equipped with Balloon tires, and those are the cars that you are seeing more of every day and which you should be equipped to service.

Willard Walker

President
Walker Manufacturing Co.
Racine, Wis.



Roll-a-Car the new Walker garage jack —low point 5 inches, high 17 inches, for balloon tires.



**5
to 17
inches**

Walker Jacks

"Dependable in Service"





Every Fourth Car Is Fisk Equipped

Today 25 per cent of the gear-shift automobiles sold are equipped with Fisk tires. This means that every fourth owner of this type of automobile has been sold on Fisk tires.

Owners of Fisk equipped cars are obviously satisfied customers. When it is time for replacement they will naturally want Fisks.

Dealers who are alive to this situation are showing constantly increasing profits.

The fact that prices on Fisk tires—both Cords and Balloons—have been greatly reduced is another element that cuts down any possible sales resistance.



Time to Re-tire
Get a FISK
TRADE MARK REG. U.S. PAT. OFF.

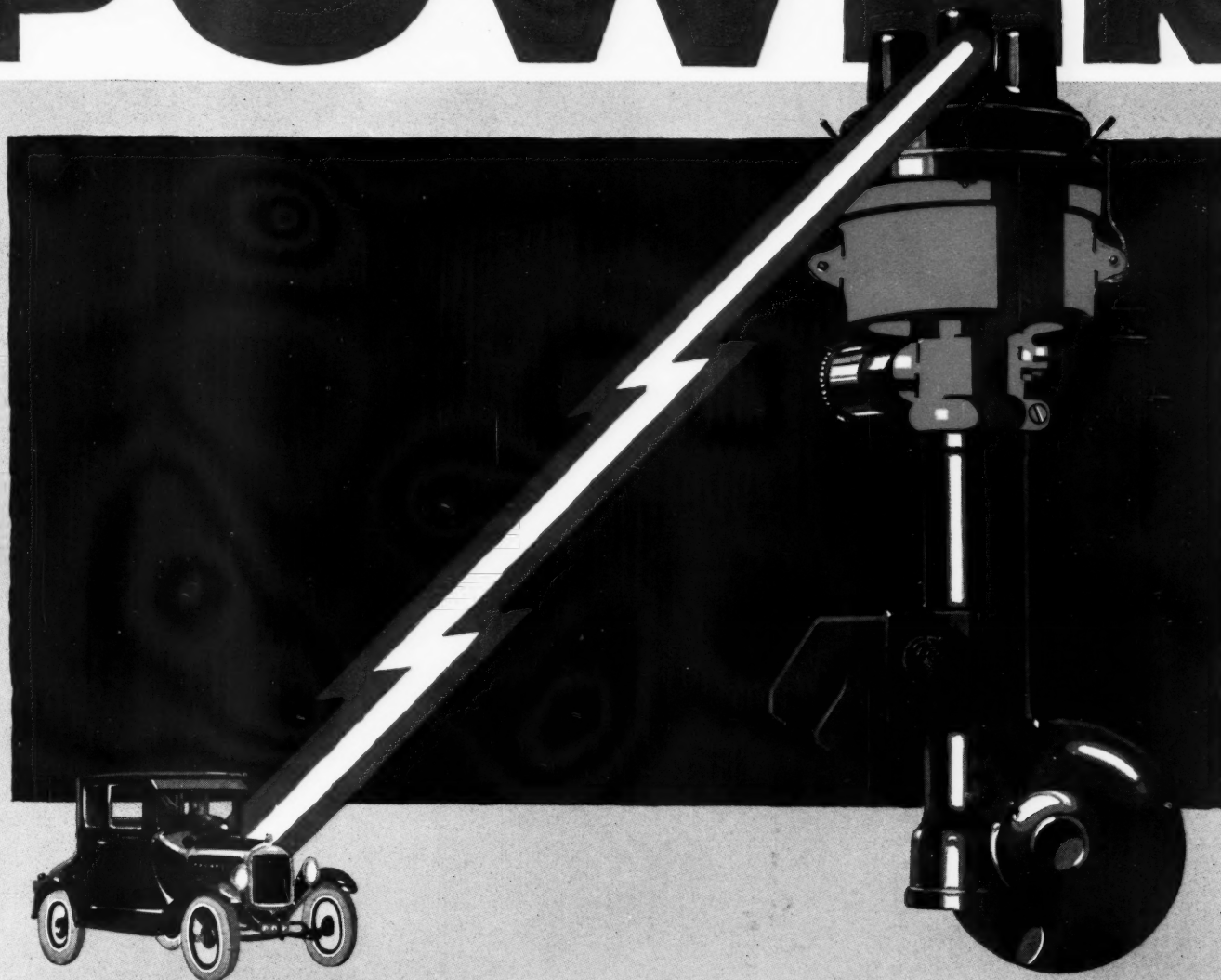
The Fisk Tire Company, Inc.

Chicopee Falls, Mass.

FISK

TIRES

POWER



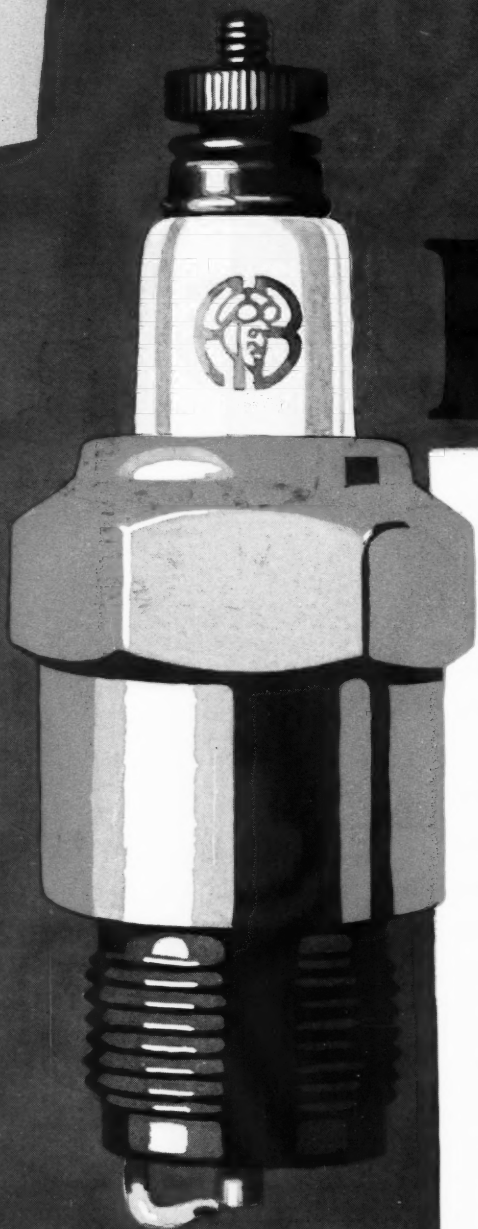
TYPE 600 BOSCH Ignition for FORDS



When you offer a Ford owner Bosch Ignition Type 600 you are presenting something that every motorist wants - - power, and uninterrupted performance. It gives Fords the ability to climb long steep hills with less need to use low gear. It saves fuel, assures a fast get-away, and a smoother running motor. There is a steady flow of profits to dealers featuring this nationally advertised Bosch product. It is easily installed on old or new Fords. Order now for the increased profit this fast seller will add to your volume.

Price \$12.75

AMERICAN BOSCH MAGNETO CORPORATION
Main Office and Works: Springfield, Massachusetts
Branches: New York Chicago Detroit San Francisco



BOSCH

Sell Bosch, the RED plug that is leak-proof, heat-resisting, and with a carbon-proof glaze. The Bosch spark plug has the service qualities which make the sale of a single plug result in selling a complete set. The Bosch, RED spark plug has a granite-hard insulator which is stronger than the service it is subjected to. The Bosch crescent shape, knife-edged special alloy electrodes do not burn away, but keep on delivering a full, ribbon-like spark. Feature the Bosch Plug, its sturdy looks, its national advertising helps sales, and its Bosch construction and standardized quality assure repeat orders. Stock Red Bosch Spark Plugs today from the nearest Bosch Branch or your wholesaler.

Ford Size 75c

Regulars \$1.00

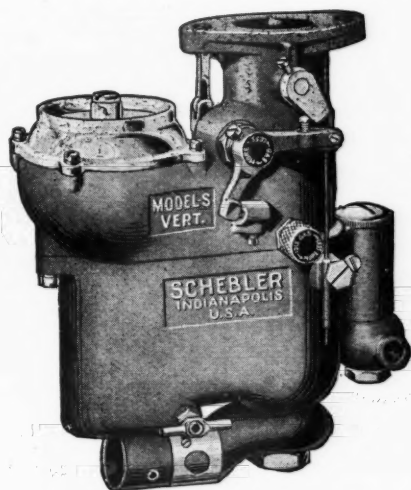
AMERICAN BOSCH MAGNETO CORP.

Main Office and Works: Springfield, Massachusetts

Branches: New York Chicago Detroit San Francisco

SPARK PLUGS





extraordinary performance marks Schebler-equipped cars

**In addition to Schebler as standard equipment on a score of America's finest cars.*

**And also in addition to an astonishing growth in replacement sales. Records show the New Schebler Model "S" in demand principally FOR CARS LESS THAN ONE YEAR OLD!*

Another proof* of superior performance obtained with the EXACT carburetion of the New Schebler Model "S" Carburetor is the number of stock car records marked up recently for Schebler equipped automobiles.

Chandler cars—Schebler equipped—hold several records: (1) Pike's Peak hill climb, 17 minutes, 48 $\frac{2}{5}$ seconds. (2) 1,000 miles in 689 minutes, average of 86.9 miles an hour, at Culver City. (3) the high gear climbing record at Mt. Diablo. (4) the climbing record up the Continental Divide. (5) the climbing record on Mt. Washington.

Wills Ste. Claire—Schebler Equipped—holds the transcontinental record, 3,367 miles in 83 hours 12 minutes.

In the Ninth Annual Los Angeles-Yosemite economy run under the AAA, a Gardner 8 Schebler equipped established a record of 17.78 miles per gallon, and a Schebler equipped Roamer averaged 23.32 miles per gallon—the best in its class, also.

In the Tenth Annual Los Angeles-Yosemite economy run, the Duesenberg-Schebler won the grand sweepstakes, averaging 19.86 miles per gallon.

A Gardner 8—Schebler equipped—scored as official U. S. Mail Carrier by covering 2,017 miles in 59 hours and 27 minutes, an average speed of 35.5 M. P. H., with the astonishing economy (for an eight cylinder 75 horse power motor) of 15.5 miles per gallon.

It is because of these many records and because Scheblers are giving such fine performance and good service as standard equipment on other cars such as Marmon, Duesenberg, Auburn, Reo, Cleveland, McFarlan, Kissel, etc., that Schebler has earned the right to be called "The World's Finest Carburetor."

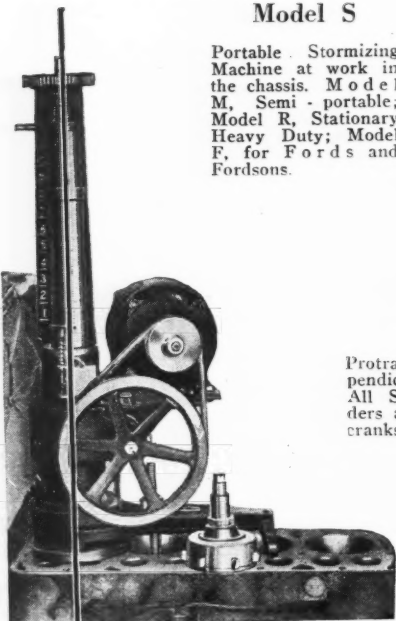
**WHEELER-SCHEBLER CARBURETOR COMPANY
INDIANAPOLIS**

1926 : Schebler's Silver Jubilee Year : Established 1901

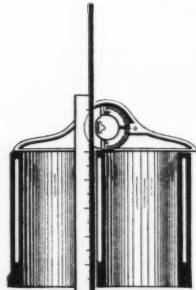
SCHEBLER
REG. U. S. PAT. OFF.
*The World's
Finest* **CARBURETORS**

Model S

Portable Stormizing Machine at work in the chassis. Model M, Semi-portable; Model R, Stationary Heavy Duty; Model F, for Fords and Fordsons.



Protractor checks perpendicular alignment. All Stormized cylinders are square with crankshaft.



CONSTANT PERPENDICULAR

Cylinders of modern motors are aligned perpendicular at the factory. Piston travel causes cylinders to wear out-of-true alignment.

Every cylinder must be kept in **CONSTANT PERPENDICULAR** (square with the horizontal alignment of crankshaft) if "Free Floating" pistons and efficient performance is expected.

There can be no substitute for perfect alignment—when cylinder wear exceeds .005, hones, reamers, "toy" grinders and other unguided tools are unsafe for correct alignment because they *follow the hole*. Cylinder reconditioning requires rigidly guided machines that do not pilot from the worn walls of cylinders.

Storm Machines are precision tools that place accuracy under positive control. All Stormized cylinders will be realigned perpendicular regardless of worn condition of cylinder walls and all cylinders of a block will be oversized to identically the same size. Any mechanic can do a perfect job of cylinder reconditioning with Storm Equipment. The automatic and labor saving features insure accurate work, good profits and satisfied customers.

In face of the vast amount of this profitable work to be done, every shop should have Storm Equipment—the quick, sure method of performing the major repair operation to a motor and restoring factory accuracy to cylinders. Write us direct or ask your jobber.

STORM MFG. CO., INC.
406 (A) 6th AVE. SO., MINNEAPOLIS, MINN.

The AMES Crankshaft Gauge

Measures and tests Crankshafts—Wristpins and other round parts—Shows the wear and out-of-roundness by simply twirling the gauge about the part. Dial face reads directly in thousandths of an inch.

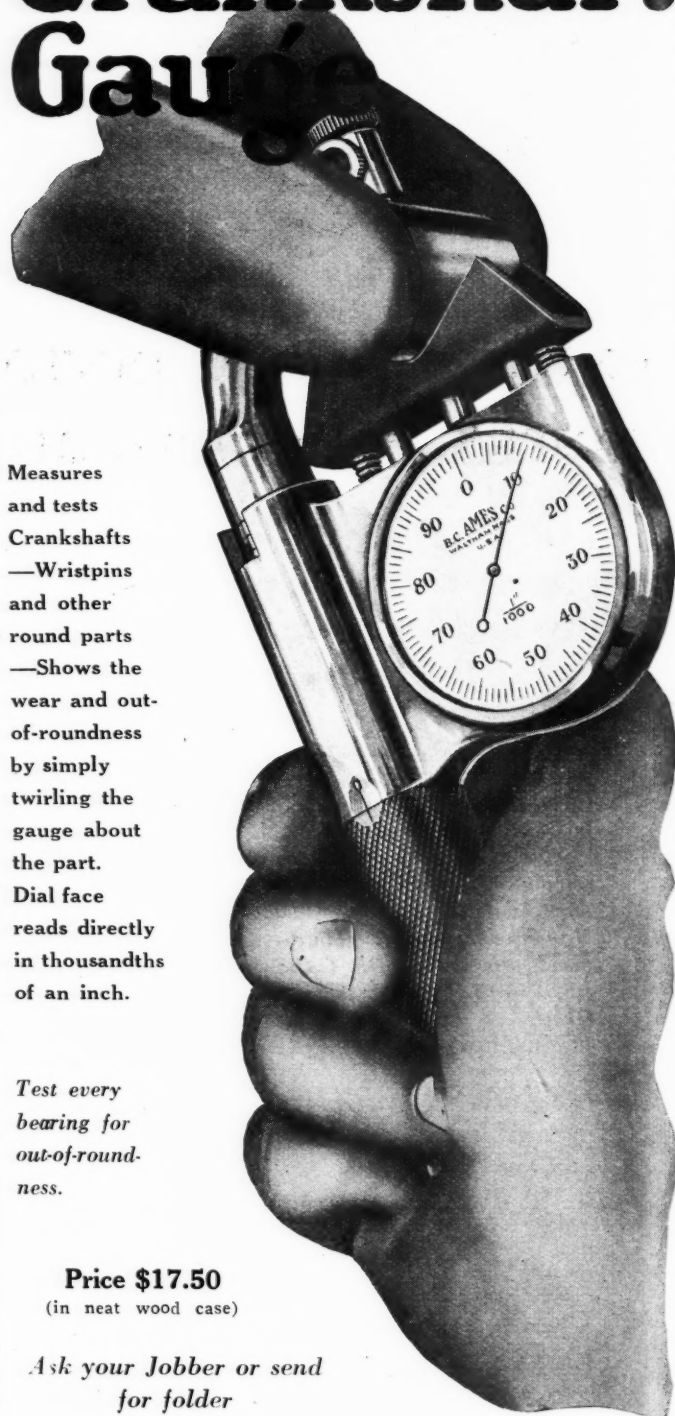
Test every bearing for out-of-roundness.

Price \$17.50
(in neat wood case)

Ask your Jobber or send for folder

B.C. AMES CO.
Waltham, Mass.

"Largest Makers Dial Gauges in the World"



The life of a Car

Depends on thorough lubrication



THE price a man pays for a car is only part of the story. How long the car will live and how much service it will give, depend almost entirely upon the kind of attention the car gets. For just as soon as a car starts rolling along over the roads, friction begins in numerous places,—and the only successful antidote is thoro and frequent lubrication.



Larkin-Thuro Lubricant is a pure solidified oil, possessing in liberal measure that quality of viscosity—or slippery-ness—which gives the necessary film for effective lubrication.

Larkin-Thuro High Pressure Lubricating Equipment includes every essential to good lubrication,—from high grade, quality-built compressors of varying capacities, to a genuine solidified oil to use in them which furnishes that quality of slippery-ness so necessary in the elimination and prevention of friction.

And remember this: Most cars are not lubricated half as often as they should be. If you don't believe that, lubricate a spring shackle thoroly, then, after the car has run a hundred miles, pull the bolt and take a look.

Meanwhile, ask your Jobber how to boost your profits with Larkin-Thuro Equipment. If your Jobber can't tell you, write us direct.

The Larkin Automotive Parts Co.
Dayton, Ohio

This is the Larkin-Thuro A-25 Compressor, equipped with a ball jointed, all-steel hose and furnishing a powerful yet easily operated device for speedy lubricating work.

Larkin-Thuro Lubricating Equipment—made exclusively for repair and replacement parts only and can be used on any car or truck equipped with Alemite or Zerk Systems.



Larkin-Thuro Lubrication Keeps the Upkeep Down

WATERVLIELT

*Spiral
Expansion
Aligning*

REAMER

for Piston Pin Bushings
on all Cars and Trucks

YOU don't buy a reamer every day. A good reamer is good for a lot of service . . . its original cost is distributed pretty thinly over a great number of jobs. And when you consider the time and temper saved with a properly designed, well made reamer . . . its absolute dependability and long life, and the satisfying finish on the job, it's just good business to insist on the best. That's why real mechanics specify "Watervliets."

After your Watervliet has served you faithfully and well, fit it for added service by having it factory re-sharpened for a dollar.



Special Garage Set No. 10PE

Ten of the most generally used sizes in a sturdy oak case. The ideal set for garage and service station.

Ask your jobber or write for literature

Watervliet Tool Co., Inc.

1037 Broadway Albany, N. Y.

New York—1780 Broadway
Kansas City—711 Mutual Bldg.
San Francisco—661 Turk St.





You Pull Good Big Profits With BASLINE AUTOWLINE

In view of the established quality and reputation of BASLINE AUTOWLINE, it ought to sell for more than any other line on the market. But in order to further stimulate the present large sales of this *Original* wire rope towline, we reduced the prices to the trade last season.



Jobbers and Dealers write today for our Price List and Descriptive Literature. Then you'll realize that you can make some real money pushing this well-known, *absolutely-dependable* towline, the towline of exceptional *proved strength*.

BRODERICK & BASCOM ROPE CO., ST. LOUIS

Eastern Office and Warehouse: 76 Warren Street, New York City

1340

Here's a Tip that will Increase Sales NOW!



The hunting season is on. Every sportsman in your town should carry a few cans of Shaler Patches when he sets out. Let 'em know that the Shaler makes perfect repairs on rubber boots as well as on tire tubes.

If any of them haven't a Shaler outfit, you make a sale. Those who have this handy tube repair outfit will appreciate the suggestion.

Keep after the motorists too. Most of them have used up their supply of Shaler Patches and need more. A good way is to ask every motorist—"Got Plenty of Patches for Your Shaler Vulcanizer?"



The only TUBE REPAIR Outfit that makes permanent Heat-Welded (VULCANIZED) Repairs

C. A. SHALER CO.,
219 Fourth St., Waupun, Wis.

World's Headquarters for Tire Repair Devices

If It's For An Automobile—We Have It!

Our Entire Building and 3 Wrecking Yards Take
Care of Our Tremendous Stock of New and Used

Motors

M. U. Buda, com.
with starter, genera-
tor and transm...\$135.00
without Starter, genera-
tor and transmission...\$100.00

T. U. W. Buda complete with
trans., starter and gen...\$125.00
Without trans., st'ter and gen...\$100.00

7R Continental, complete.....\$100.00
7U or 6Y Continental.....\$100.00
4 Cyl. Duesenberg, complete.....\$175.00
16 Valve Stutz Motor, complete.....\$175.00
Single Six Packard Motor.....\$225.00

GEARS

SHAFTS

MOTORS

TRANSMISSIONS

AXLES

RADIATORS

BODIES

TOPS

TIRES

TUBES

RIMS

IGNITION

NEW AND
USED

Balloon TIRES AND
TUBES at a Saving

Timken Rear Axles

For all makes of trucks and touring cars.

Bosch Magnetos

DU4.....\$12.50 DU6.....\$10.00
Prices on others on request.

Accessories

New and Used

We have a special

Buick

dept. with a com-
plete stock up
to 1926.

IF THE PART YOU NEED IS NOT LISTED

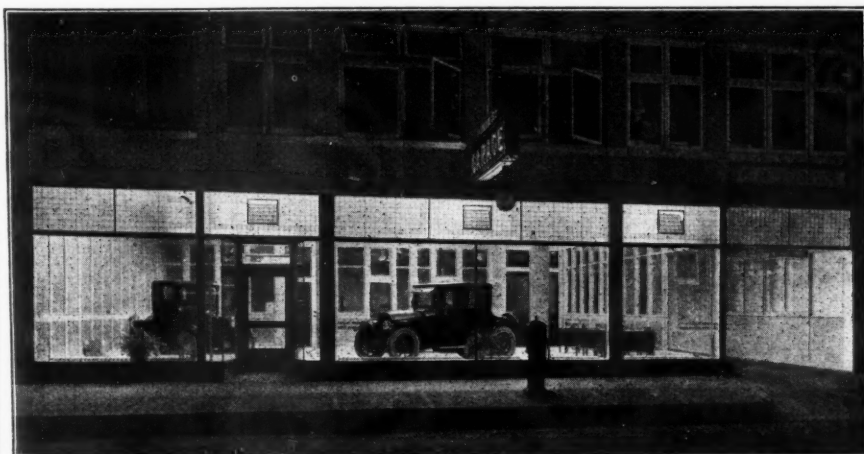
Write or Wire Us Your Needs—Prompt Attention Given to All Orders

STATE AUTO PARTS CORPORATION

2011-13-15 S. State St.

Service and Quality

Chicago, Ill.



Put Every Front Foot On Your Sales Force

The amount of rent you pay for your show room is largely determined by its front footage. This space is the most valuable part of the show room because it is the part which is constantly in view of the public.

Make every foot of this valuable space work for you! A Kawneer Solid Copper Store Front does just that. By enabling you to display your cars in an attractive manner, your Kawneer Front is constantly at work pulling sales for you. It works day and night building up your business and increasing your profits. Thousands are now paying their rent through the extra sales brought in by their Kawneer Fronts.

Kawneer

SOLID COPPER
STORE FRONTS

The latest Kawneer Book of Designs shows types of motor sales windows that are increasing profits for dealers everywhere. You should have a copy. Upon receipt of the coupon below, attached to your letterhead, we will mail a copy without obligation to you.

THE
KAWNEER
COMPANY

4124 Front Street Niles, Michigan

GENTLEMEN:—Please send me your
latest Book of Designs.

Name

Address

**GRIPPER
SALES
KEEP
GROWING
AS YOU
GO**



**START
FALL
AND
WINTER
SALES
NOW**

GRIPPERS

Are For All Disc, Wire and Wood Wheels

They serve just as well with high pressure or balloon tires—which makes them suitable for every car running on pneumatics today.

GRIPPERS go on in case of emergency. They do not displace non-skid chains. But they do equip cars to come out of mud, snow, sand or other trouble immediately and under their own power. The demand for them is tremendous.

Get a Sample Now

The season of best GRIPPER sales is here. The sample will show you what GRIPPERS will do—and it will sell more for you, at a liberal profit. ORDER NOW, C. O. D. Agents wanted.

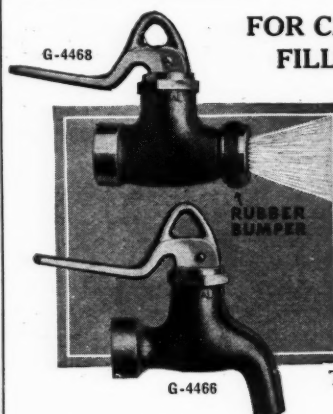
Balloon Sizes	Cord Tires To Match	Shipping Weight	Price Set of 2
4.40	3½ to 4"	7 lbs.	3.50
4.95	4" to 4½"	8 lbs.	4.00
5.25	4½ to 5"	9 lbs.	4.50
5.77	5" Heavy	10 lbs.	4.50
6.20	5" Truck	11 lbs.	5.00
6.75	6" Truck	12 lbs.	5.00

REGULAR TRADE DISCOUNTS

GRIPPER MFG. CO.

536 Lake Shore Drive

Chicago



FOR CAR WASHING AND FILLING RADIATORS

G-4468 Royal Selfclosing Auto Wash Valves

eliminates all sloppiness and waste water—give you water when you want it and where you want it. Fit any standard garden hose connection.

G-4466 Selfclosing Auto Radiator Fill Faucets

eliminate the old-fashioned, sloppy, unsatisfactory water can—fill your radiator direct from faucet. Every up-to-date filling station and garage should have them.

If your jobber can't supply you, write us direct.

The Royal Brass Mfg. Co.
Cleveland, Ohio



Bearings to Your Specifications

We specialize in the production of Bearings to meet the exact specifications of the manufacturer. May we quote on your requirements?

Bearings Company of America

Lancaster, Penna.

Detroit Office
1012 Ford Bldg.

THE Dyneto

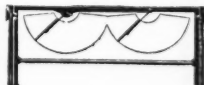
6 BIG SELLING FEATURES

Show the Dyneto Wiper to a customer and he'll want it. Here are features that clinch the sale:

1. Uses less than one ampere.
2. Has ample power to drive one or two blades.
3. Uniform, unchanged operation on hills.
4. Compact, good looking.
5. Simple design.
6. Extremely low price.

\$4.50
with single blade

DOUBLE VISION GREATER SAFETY



With the help of our dealer selling aids you can turn every wiper prospect into a Dyneto customer. With our special tandem demonstrator, you can sell the customer the double blade attachment. Double vision means greater safety to the car owner, and more profit for you. Dealers everywhere are finding that Dyneto Wipers are fast sellers. Write today, for complete information about our dealer proposition.

\$6.00

with two blades

Dept. J

OWEN-DYNETO CORPORATION
Syracuse, New York

ELECTRIC WINDSHIELD WIPER

Toot Sweet

TRADE MARK

Satisfies the Demand for a New Sound in Warning Signals

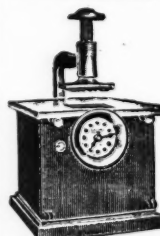
Car owners want new sounding warning signals. Thousands of them are adding an extra one besides the regular standard equipment.

TOOT SWEET is a leader among beautiful sounding signals. Its 4 tones make it musical, but it is clear and commanding as well. Operates from the exhaust, without cost to owners. Liberal profits are available on sale and installation of TOOT SWEET. Ask us for complete details.

ILLINOIS BRASS MFG. CO.
Chicago, Illinois

FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

NOV 19 1920 4 31 PM

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic—except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N. J.
"Established Since 1904"

You Can Pick Up Some of These Big Profits



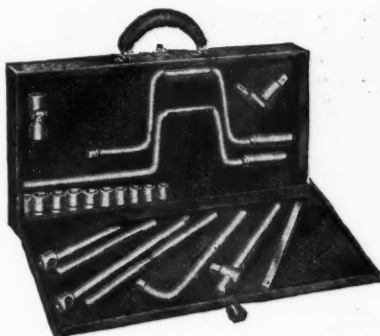
Our New Car Cleaning Manual Will Tell You How!

The auto laundry business is receiving so much attention because it is offering a new channel of increasing profits. KLEAN-RITE has just published a 24-page manual setting forth car cleaning as a business, showing cost and profit charts and other data never before assembled. Those who have seen it say "it is the most valuable presentation of the car washing business ever compiled."

The auto laundry is a distinct business, but lends itself to any division of the automotive or filling station industry—as a dependable means of reducing overhead and increasing net profits. Get this book for your reference files.

Copy mailed prepaid upon your request
No Obligation

KLEAN-RITE AUTO LAUNDRY CO.
332 S. Michigan Ave., CHICAGO, U. S. A.



\$935

Net Price

No. 28—Interchangeable Hex Nut Service Set. Complete in handy steel case.

A HEX NUT SET FOR SERVICING ALL CARS

THIS compact little outfit instantly provides the right socket for any nut on any make of car. Has all the popular handles and special attachments for getting into cramped quarters.

Set consists of twenty-one parts, including ten Hex sockets from 7/16 to 7/8. Sockets are of CHROME NICKEL Steel, electrically heat treated and hardened to withstand everyday service without breaking down. All at a price so reasonable that no fleet owner can afford to be without them.

Write today for Catalog No. 50 describing complete line of Socket Wrenches

STEVENS-WALDEN-WORCESTER, INC.
Manufacturers of Stevens "Speed-Up" Tools and
Walden-Worcester Wrenches
WORCESTER, MASS.



STEVENS-WALDEN-WORCESTER
INCORPORATED



Price 3.00

No More Overheating of Fords

with the
G. B. Impeller

This scientifically designed 24 blade fan gives your car that fine smooth running during the day which you have heretofore experienced perhaps only at night. The G. B. IMPELLER increases efficiency, prolongs life of your motor, saves gas and repair bills.

A Ford equipped with a G. B. IMPELLER simply cannot overheat, no matter how much or how hard you run it.

Surpasses by far in performance the water pump combined with the regular fan and eliminates the need of one. 24 blades! Producing tremendous airflow with static pressure. The G. B.

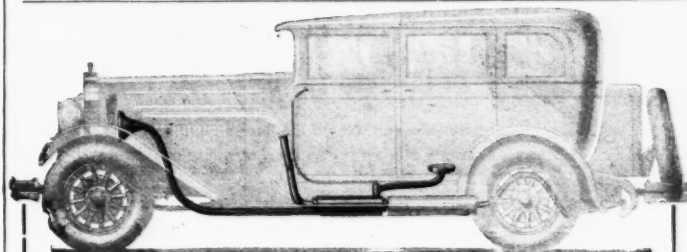
IMPELLER consumes no additional power, puts no extra stress on the fan belt. Nothing to get out of order. Installed in 5 minutes. For winter use and milder cooling, reverse the Impeller, i.e. turn the other side towards the radiator.

Regular discounts to trade.

10 days trial, money refunded if performance found unsatisfactory.

Agents wanted

DE BOTHEZAT IMPELLER CO. INC.,
1922 Park Avenue, N. Y. C.



Here's the New Kysor Motor Car Heater

Same as the time tried standard model but simplified for easy service station installation. Does not necessitate removal of muffler, and cars in service can be quickly equipped—while owners are at their offices.

It is a forced draft heater, not the common hot air kind. Ventilates as it heats . . . fresh air is driven into the car and forces used air out through crevices around doors and windows . . . gives ample warmth without odors . . . heats within two minutes after motor is started . . . temperature regulated with button on the dash.

Write for Circular C, giving complete description.

KYSOR MOTOR CAR HEATER
KYSOR HEATER CO ALLEGAN, MICH.



ACME Electric Tube Plates

Insure Curing Heat in 3½ Minutes

They provide the most efficient equipment of the kind on the market—yet at the lowest price. They are unconditionally guaranteed, including the heating element and thousands of them are in use today, giving perfect satisfaction. Cost of operation not over 1c per hour. Returns that pay big profits. Write.

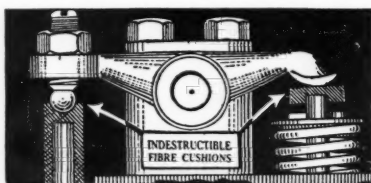
Acme Electric Co.

4020 N. Keeler St.

Chicago, Ill.

16

Noisy
Points
of
Contact
in Rocker
Arms



Quieted with

DUNN VALVE SILENCERS

For all Chevrolet Engines. Consist of 8 fibre discs for valve stems and 8 fibre sockets for push rods. Allow perfect valve adjustment. Stop noise. Installed in a few minutes. Sold by most dealers. Set packed in carton \$2.50. Liberal trade discounts.

Dept. M

Dunn Manufacturing Co., Clarinda, Iowa, U.S.A.

"The Chief"



Profit Pumps for Fall

The Blackhawk "Chief" and "Scout" water pumps for Fords are real profit producers. Ask your jobber about them. They sell at \$7.50 and \$5.00 complete with belt and horn bracket.

Blackhawk Mfg. Co., Dept. S, Milwaukee, Wis.

BLACKHAWK WATER PUMPS



So-Lo Jack Co., Inc.

Attleboro Mass.

Sales Office
108 Massachusetts Ave.
Boston Mass.



**Mallory
Ignition Coil**

Has two primary windings instead of one. Gives a hotter spark, makes easier starting, gives more power, quicker pickup and more mileage. Try it on a sluggish motor. Write for full particulars.

The Mallory Electric Corporation
Toledo, Ohio

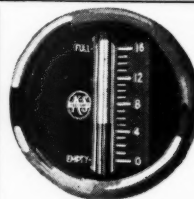
TIMKEN
Tapered
ROLLER BEARINGS



QUALITY—PROFIT—TURNOVER

**American
Hammered
Piston Rings**

American Hammered Piston Ring Company
Baltimore, Maryland



**The K-S GASOLINE
Telegage**

A gasoline gauge on the Dash. Note our half page advertisement in the Saturday Evening Post, October 23rd. Write for description and proposition to the trade.

KING-SEELEY CORPORATION
298 Second Street Ann Arbor, Mich.
Chicago Branch. 2450 Michigan Boulevard

Transmissions
and Clutches

FOR
**BROWN-LIFE
GEAR CO.**

Trucks, Busses
Passenger Cars

QUICK SERVICE ON COMPLETE UNITS OR PARTS

BROWN-LIFE GEAR CO.
SYRACUSE, N. Y.



**SPEE-DEE CLEANS UP
for Dealers**

Results in quick stock turn-over, with small investment and liberal profits. Without water it removes grease, stains, etc., from hands, cloths, upholstery, paint or enamel. Indispensable in shops, service stations and car kits. List 35c.

Write for discount details.

States Chemical Company
703 W. Fulton St. Chicago, Ill.

**The GENERAL
TIRE**

Built in Akron, Ohio,
by



The General Tire and
Rubber Co.



20c Ea. (Retail)

Write for
Attractive Discounts

Always Insist Upon
**Genuine
Apex Innerings**

Most good
Jobbers stock them
If it isn't an Apex—it isn't an
Innering

THOMSON MFG. CO.
Dept. C Peoria, Ill.

NEXT WEEK

—is the time to read next week's issue of MOTOR AGE,
as you are reading this week's issue this week.

MOTOR AGE

5 So. Wabash Ave.

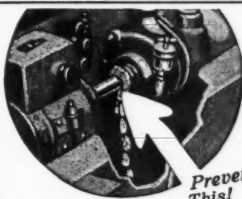
Chicago, Ill.

TASCO
Gas Gauge for
FORD
CHEVROLET
OVERLAND
and STAR



Sells Quick at \$1.25 Retail.
Types "K" and "J" for 1926
Chevrolets and all
Stars Sell at \$1.50

THE AKRON-SELLE CO.
Akron, Ohio



Stops Pump Shaft Leaks Immediately and Permanently

Conneaut Plastic Metallic Packing molds in the fingers to fit stuffing-boxes of any size or shade. It is a repair for the worn shaft and loose bushing. At your jobbers; if not write us.

1 lb. can.....\$1.75 per pound
5 lb. can.....\$1.60 per pound

THE CONNEAUT PACKING CO.
Conneaut, Ohio

Prevent
This!

Thomas

TIRE COVERS—
TOP COVERS—
SEAT COVERS

Catalog Upon Request Also Winter Enclosures
for Fords and Chevrolets

THOMAS AUTO TOP CO. — MUNCIE, IND.



Red Cat Heaters

Red hot winter profit item. More heat—less cost. Makes a hit with car owners. Made for Ford, Dodge, Overland, Star, Chevrolet, Hudson and Essex cars. See your jobber.

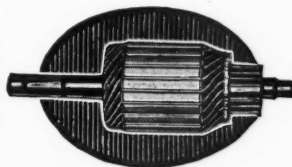
G. A. ROTH MFG. CO., Hastings, Neb.



WESTINGHOUSE AIR SPRINGS

The finest known method of shock absorption
THE WESTINGHOUSE AIR SPRING CO.

Factory and General Offices, New Haven, Conn.
New York Boston Philadelphia Cleveland
Chicago Atlanta Los Angeles



FREDERICKS

Rewinds

New Rewind Profits—See announcement every 4th week. Write now for price list. The H. M. Fredericks Co., Lock Haven, Pa.



UNITED STATES Portable Electric DRILLS

Ask for
Catalog
105

THE UNITED STATES ELECTRICAL TOOL CO.
Cincinnati, Ohio, U. S. A.

Built by the oldest
makers of
Portable Electric
Drills in the
World.

The Original Bosch

Franchise details for selling ORIGINAL BOSCH Automotive Equipment will be sent to any Distributor, Dealer or Service Station on request.

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109 West 64th Street New York, N. Y.



ORIGINAL BOSCH units bear the full name, Robert Bosch, and the trade mark shown at left. These are the identifications of Bosch quality—famous since 1887.

ELIMINATES SLOW LEAKS

—from rusted clincher rims. An endless piece of specially compounded rubber. Snaps on rim like rubber band. Fits snug all around. Prevents tube touching rusted rim. One size fits all clincher rims. Write for discounts.

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Clincher Rim Flap


Valve Face Grinding Machine

Get a demonstration of Sioux before you buy any valve grinding machine. GUARANTEED FOR A LIFETIME.

Your Jobber Sells It

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A WEED Product

WEED Levelizers interest dealers because they are easily attached and require no service.

Made by the makers of WEED CHAINS & WEED BUMPERS



A PARTS MANUFACTURER CAN MAKE MONEY IN THIS NEW YORK PLANT

Offers unusual advantages:

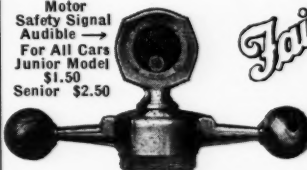
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Safety Signal
Audible —
For All Cars
Junior Model
\$1.50
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Locking Cap For All Cars

Junior Models\$3.50
Senior Models 4.50

Ask Your Jobber

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REG. U. S. PAT. OFF.

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Simplicity Manufacturing Company

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Gilmer

Makers of
the world's
best known
fan belts.

L. H. GILMER & CO., Tacony, Philadelphia

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FOR SALE—Fast Frontenac racing car. Fine condition, ready to race. Would consider an auto in trade. H. Kohlert, St. Charles, Ill.

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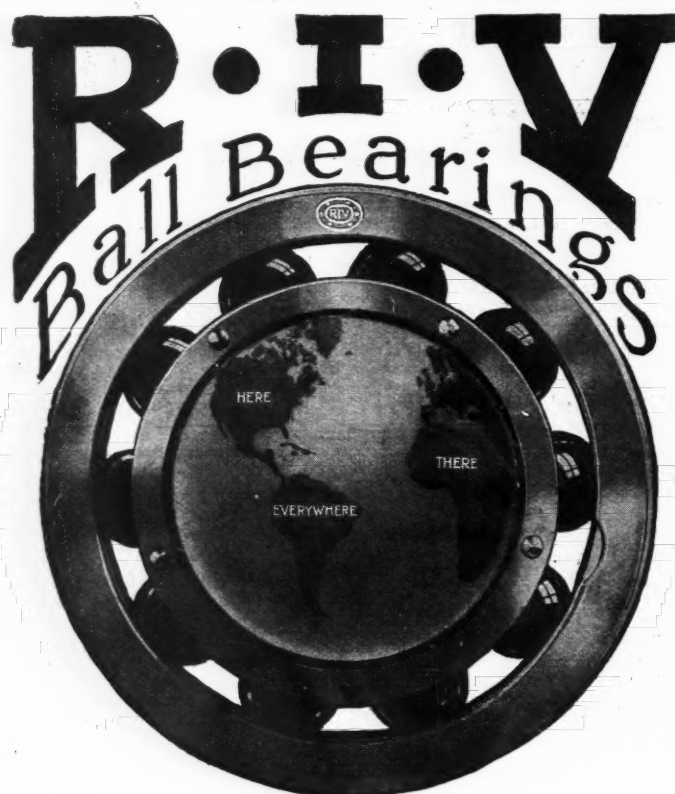
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Each month brings new evidences of the replacement trade's appreciation of the R.I.V. ball-bearing proposition.

Almost never does a real quality product become available at better than competitive prices.

Some good companies now on our books thought our plan was too good to be true. A little inquiry proved it to be true. A little experience proved it to be good.

Good-and-true—that describes the R.I.V. proposition—and R.I.V. bearings, too. For the rest, our affairs are taken care of by honest-to-goodness human beings who believe that a live-and-let-live policy contains the real wisdom of business.

*Write us for distribution rights—
especially for the middle west.*



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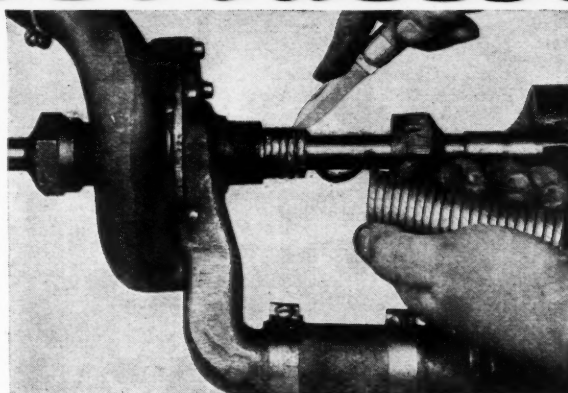
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Auto Pump Packing Metallic



The Pump Packing the Motor Builders Use

"John Crane" is standard equipment on over 40% of all cars. Prevents scored and leaky rods. Absorbs rod friction and vibration. Saves non-freezing mixtures.



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Compresses as shown into a one piece packer. Gives long service. Makes a repacking job worth more money.

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Gentlemen:

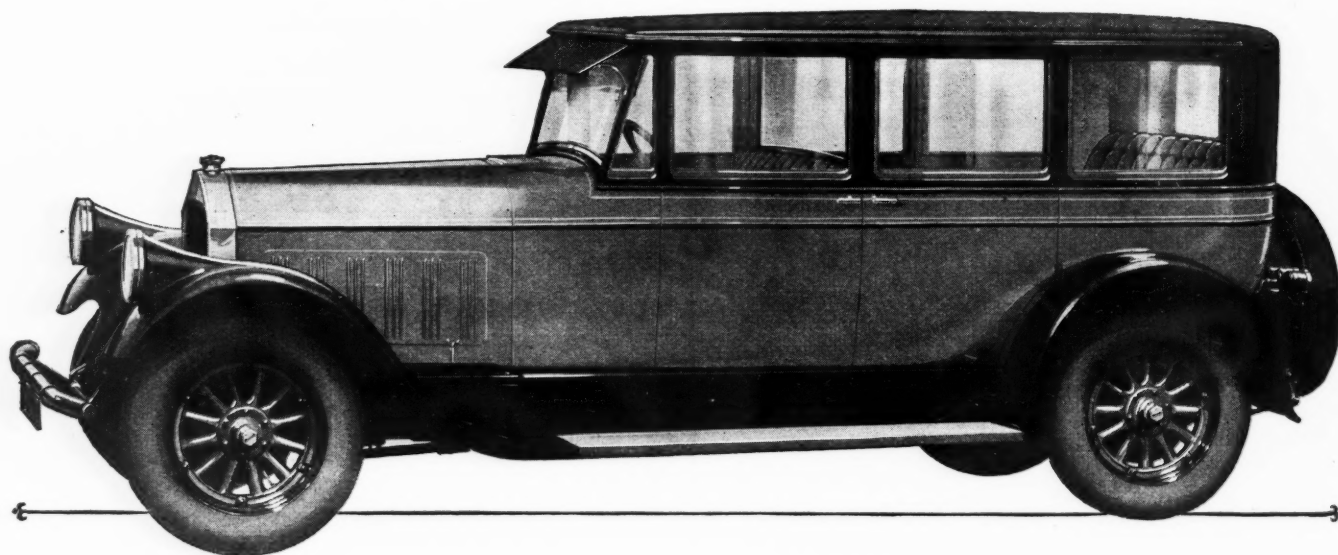
Send _____ spools 40 ft., $\frac{3}{8}$ in. of "John Crane" Style 112 Replacement Pump Packing. Net each \$2.50 C.O.D.

Name _____

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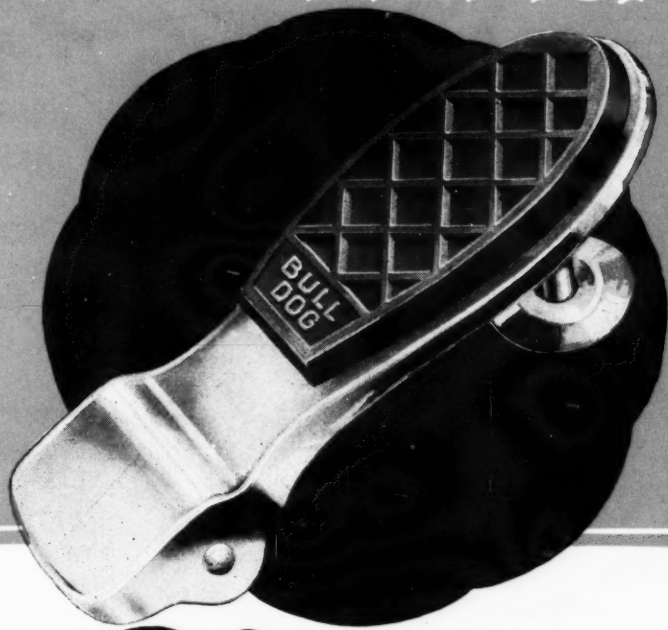


"Here, I believe, is the finest of all motor cars. This unreserved statement is made with profound respect for Pierce-Arrow's esteemed contemporaries and with full cognizance of Pierce-Arrow's past achievements. All the pleasure, comfort, economy, safety and pride of ownership that money can buy are embodied in this new car. Pierce-Arrow dealers are offering demonstrations."... MYRON E. FORBES, President.

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Right now, with Pierce-Arrow's moderately priced SERIES 80 enjoying its greatest success, Pierce-Arrow is widening dealer opportunity still further by adding a new dual-valve six, the SERIES 36, available at a price that should shortly result in doubling if not trebling demand for Pierce-Arrow's larger car.

The Best Accelerator For Fords



It's Universal

**New "Model C" Bull Dog Fits
Fords With New Vaporizer**

Also Those With Regular Carburetor

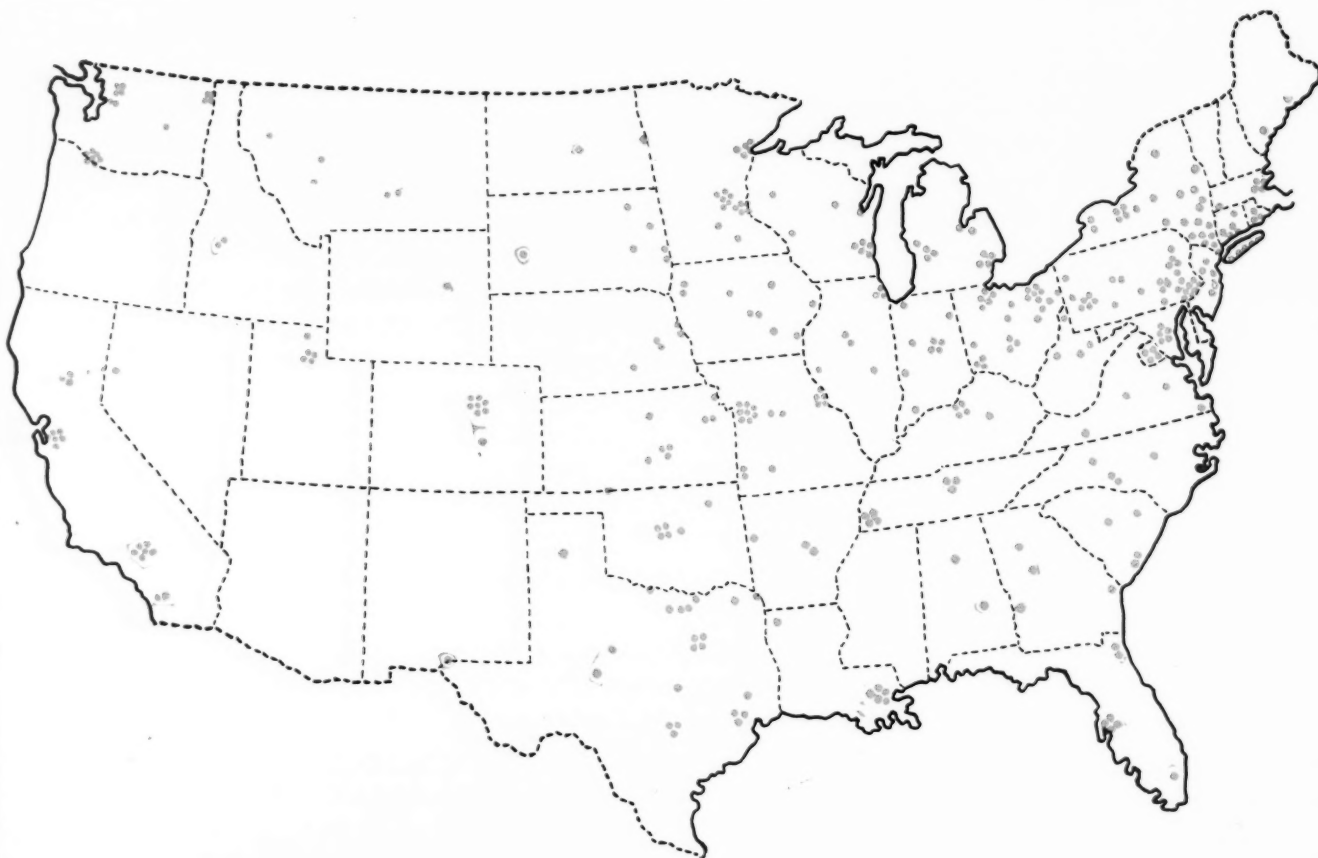
AN advanced Bull Dog Foot Accelerator for Fords is here. It is universal—the one accelerator (Model C)—fits all Fords and all carburetors for Fords.

This New Bull Dog marks the most important improvement ever made in Accelerators for Fords. It brings to those who sell Bull Dogs one model to take care of their entire foot accelerator demand.

Sell this Bull Dog, with its simple installation, wonderful hinged type pedal with exclusive and comfortable foot rest—with its generous profit to you on every sale.

**Sells
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make a
Real Profit**

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**World's Largest Manufacturers of
Foot Accelerators**



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Ask your favorite jobber salesman to tell you about the Packard DeLuxe Merchandiser with assortment of cable that will take care of any car on the road. This outfit constitutes a complete cable department and the sales helps that go with it will produce a profit for you in rewiring cars.

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